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> It is apparent that a knowledge of world-affairs was never of more importance to Americans than today. The spirit of distrust which pervades the Old World is not without its effect upon our own country. How to combat this disintegrating tendency is a problem worthy of the most serious thought. Perhaps one of the best methods is the promotion of a better understanding of other nations through wisely directed educational effort.
>
> The purpose of the foundation shall be the promotion of a better understanding on the part of American citizens of the other peoples of the world, thus establishing a basis for improved international relations and a more enlightened world-order. The aim shall always be to give accurate information, not to propagate opinion.

Annual Institutes have been held at the University of Chicago since the summer of 1924. This series of volumes includes the lectures there delivered, in essentially their original form.

GOLD AND MONETARY STABILIZATION

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GOLD *and* MONETARY STABILIZATION

[LECTURES ON THE HARRIS FOUNDATION 1932]

QUINCY WRIGHT, *Editor*

By JACOB VINER, *Professor of Economics, University of Chicago;* GOTTFRIED HABERLER, *Privatdocent, University of Vienna;* H. PARKER WILLIS, *Professor of Banking, Columbia University;* LIONEL D. EDIE, *Economist of the Investment Research Corporation;* JOHN H. WILLIAMS, *Professor of Economics, Harvard University*

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FOREWORD

The lectures here reproduced with exception of the last were delivered at the Ninth Institute of the Norman Wait Harris Memorial Foundation, held at the University of Chicago from January 27 to January 31, 1932. The Institute was devoted to "Gold and Monetary Stabilization," and the lectures discussed the problem from both theoretical and practical points of view.

Jacob Viner, professor of economics at the University of Chicago, has served as special expert on the United States Tariff Commission and the United States Shipping Board. During the year 1930–31 he was visiting professor at the Postgraduate Institute of International Studies, Geneva, Switzerland. Through his writings on the tariff, international trade, international finance and economic theory he has become known as a leading authority on these subjects. In the first lecture of this series he surveys the gold standard historically, clearly indicating that management has long been necessary to make it workable.

Gottfried Haberler, Privatdocent, University of Vienna, and an official of the Vienna Chamber of

Commerce, was a visiting lecturer in economics at Harvard University during the year 1931–32. He has written on index numbers and the theory of international trade and is a recognized exponent of the younger Austrian School of Economics. His exposition of the business cycle, emphasizing the significance of disproportion in the application of income to the various stages of the production process, is based upon the ideas of that school.

H. Parker Willis, professor of banking, Columbia University, was secretary of the Federal Reserve Board from 1918 to 1922. He had played an important part in the framing of the United States Federal Reserve Act and has written extensively upon the Federal Reserve System as well as on banking and monetary problems in general. His exposition of the Federal Reserve policy during the depression is critical and is based on an intimate acquaintance with the subject and a consistent theory of the relations of banking policy and monetary stability.

Lionel D. Edie, economist of the Investment Research Corporation and formerly professor of finance in the School of Commerce and Administration at the University of Chicago, has written extensively upon economics, business, money, and banking. He discusses the future of the gold stand-

ard as a question in this country, as in others, not of getting off of that standard but of getting on to it, and explains the position which the United States might take in this process.

John H. Williams, professor of economics, Harvard University, writer on international trade and finance, has contributed the final article in this volume, by special request.

In view of the practical situation of world depression which confronted the Institute, the economists present decided it would be an interesting and perhaps profitable experiment to see whether they could agree on practical measures in the emergency. A committee of six persons found such agreement possible, after which others of the economists present agreed to the program with some modifications.

The Harris Foundation Institutes have not been nor are they likely to become resolution-producing occasions. It was thought, however, that the results of this experiment might interest a larger public and the recommendations were communicated to the president of the United States and other officials. They are published as an Appendix in this volume with the understanding that they express the opinion only of the economists whose names are signed to them. They do not bind the

Institute or any other of the persons connected with it.

In view of the interest which these recommendations attracted, it was felt desirable that their meaning should be explained; and Professor Williams, who was on the Committee which drafted them in original form, was asked to contribute the article already referred to on the practical problems of relieving depression, with special attention to the subject matter of these recommendations.

As a matter of permanent record the program of the Institute and the names of those who participated in the round-table meetings are printed in a second Appendix.

QUINCY WRIGHT

TABLE OF CONTENTS

INTERNATIONAL ASPECTS OF THE GOLD STANDARD

By Jacob Viner

INTERNATIONAL ASPECTS OF THE GOLD STANDARD

The currency question, Disraeli is reported to have said, has made even more persons mad than love. A quantitative test of the accuracy of this comparison is, in the present deplorable state of medical statistics, scarcely possible. But Disraeli may well have been right. For while the common tendency to attribute the inflationary type of delusion to anyone who questions the superiority of the gold standard to all other possible currency standards has served unduly to swell the ranks of those charged with monetary phobias, the degree of mental balance of those who attribute to the gold standard, as we know it, adequate possession of the qualities of a satisfactory monetary standard may reasonably be suspected of being less than it ought to be.

In times past, it was to gold as a valuable commodity that superlative merits were attributed. "Gold," wrote Columbus, "constitutes treasure, and he who possesses it has all he needs in this world, as also the means of rescuing souls from Purgatory and restoring them to the enjoyment of

Paradise."[1] Today it is to the gold standard as an instrument of social purpose that incense is burnt, and, by a perversity which my theological friends tell me finds many a parallel in the history of other religious institutions, it wins the most ardent and uncompromising worship when it seems least to merit it. Whatever its merits, it unquestionably has defects enough to justify a frank and objective examination of its claims to continued existence, whether in its present form or in some revision thereof.

As long as two countries adhere to it, the gold standard is an international standard of value. It is therefore still possible—although by a narrow margin only—to treat it as an existing international institution. It is to a considerable extent in its international, as distinguished from its internal, aspects that its major virtues are supposed to exhibit themselves most clearly. It is primarily with some international aspects of the gold standard that I propose to deal tonight, although I must confess, in advance, what you will no doubt subsequently discover for yourself, that I have not succeeded in accomplishing the impossible task of

[1] Cited from R. H. Tawney, *Religion and the Rise of Capitalism* (New York, 1926), p. 89.

clearly and sharply dissecting the gold standard into its internal and its international aspects.

In its national or internal aspect, the modern gold standard consists of a great inverted pyramid of credit currency resting on a slender foundation of actual gold, how slender, in any particular country and at any particular moment, depending in part on the nature of its currency and banking system, in part on the deliberate exercise of bank policy, and in part on the state of its international balance of payments during the immediate past. The reduction of the proportion of gold to total circulating media has been a process of gradual historical development in which England set the pace, both as to time and as to the extent of dilution of the currency with non-metallic elements. Before the war the English ratio of gold in reserves to the total volume of non-metallic circulating media convertible into gold upon demand was not over 3 per cent, and there were occasions in the latter half of the nineteenth century when this ratio fell below 2 per cent. In other countries the gold base was broader, but everywhere in modern times so-called gold currencies have really been gilt currencies, with paper money and bank credit as the predominant elements, and the layer of gilt in some cases

so extremely thin that it rubbed off under any severe strain.

These relatively small quantities of gold served not only as the base for internal credit superstructures but as a medium of international payments. Under the gold standard, gold moves out of a country to liquidate an adverse international balance of immediate obligations or to establish new claims abroad whenever it is for individual business men the most economical or convenient medium for these purposes. Now international balances of payments are highly variable in direction and amount, are largely unpredictable, and can quickly grow to threatening proportions when there is an element of distrust or panic in the situation. No country can withstand a substantial and continued external drain on its gold reserves without suffering a serious shock to its credit and to its commercial and financial stability, even if the drain is checked before the gold reserves are wholly exhausted. A severe external drain, moreover, is under most currency systems likely to excite an internal drain, and no country ordinarily has sufficient gold reserves to endure without shock and damage persistent simultaneous drains of both sorts. Other things being equal, the smaller the country's reserve ratio, the less the ability of a

country to withstand without serious consequences, and especially without being driven at least temporarily off the gold standard, drains on its gold reserves of substantial even though not extraordinary proportions.

Other things have not remained equal as gold reserve ratios have been more or less steadily shrinking during the last one hundred years or so. Some of the historical changes have tended to make this shrinkage in gold reserve ratios both technically possible and safe; other changes have operated to increase the vulnerability of mixed gold-and-credit currencies to sudden and undesired conversion into purely credit currencies.

Improvements in the speed and economy of international communication and transportation have operated to increase the quickness of response of trade and capital to changes in price levels, exchange rates, and interest rates resulting from international gold movements; and have, therefore, facilitated the operation of exports and imports and of capital movements as regulatory factors tending to check gold drains before they had reached dangerous proportions. On the other hand, new elements in the situation have tended to aggravate the menace from sudden and substantial gold movements. Capital movements,

short-term and long-term, play a more important part in international balances now than formerly, and are more subject than commodity trade or service transactions to abrupt and substantial shifts in amount and direction. The decrease in the cost of transmitting the precious metals has also narrowed the range between the gold points, or the exchange rates at which it is profitable to individuals to transfer gold from one country to another. This has lessened the importance of fluctuations in the exchange rates as compensatory factors, tending, through their influence on trade and, more important, on capital movements, to force the balance of payments back toward equilibrium and thus to check or prevent drains of gold. The increasing prevalence of monopolistic organization and price agreements, of trade union organization, and of a general sentiment hostile to wage reductions under any circumstances, has tended to make prices less flexible, less quickly responsive to downward changes in demand, and has thus operated to make changes in relative prices as between different countries a slower and less dependable factor in bringing about the adjustment of international balances of payments through changes in commodity trade balances. Most economists are agreed also that the relative importance of inter-

national as compared to internal transactions has been increasing steadily during the last century; and if they are right, then a given relative degree of adverse disequilibrium as between external debits and credits will involve a larger relative drain on the gold reserve than was formerly the case. Economists also seem to be agreed that the modern credit structure is a much more delicate and sensitive plant, less resistant to shocks and threats of shock, than it formerly was. This is an additional factor tending to make modern civilization less safe for the gold standard.

If no change had occurred beyond those I have listed, I am convinced that the gold standard would long ago have been found impracticable and would have been generally abandoned either by choice or by compulsion of circumstances. One factor not yet mentioned, however, has made possible the survival of the gold standard, namely, the development of a deliberate and centralized mechanism of control of gold movements, using central bank discount policy and credit control as its chief instruments. Such control is not a new phenomenon. It was already intermittently but apparently ably operated by the Bank of England in the eighteenth century, and I know of few modern devices for such control which the Bank of England had

not already made use of, at least upon occasion, and of none which had not been suggested and given some consideration, by 1850. But the development of central control as a systematic and routine practice, and still more the formulation of a rationale of control, has been a matter of slow and irregular progress. In the United States the only trace of central control, until the establishment of the Federal Reserve System, consisted of the transfer on a few occasions by the United States Treasury of parts of its gold holdings to and from the banks. A definite policy and practice of control of gold movements on the part of the Banque de France cannot be said to have existed before 1852, and in Prussia such a policy dates only from 1856; and for a period of some length the exercise of central control in these two countries was largely confined to attempts to countervail the regulatory efforts of the Bank of England. In Canada a potential agency of central control was first established during the war, and it has not yet been given or adopted for itself any intelligible principle by which to govern its operations. In other backward countries, as far as central banking was concerned, and especially in Latin-American countries, either the gold standard did not prevail, or there was little development of credit banking, or the gold

standard was adhered to only during fair weather and was abandoned without much ceremony whenever a severe gold drain was imminent. The reluctance to introduce effective and systematic central control of the currency and credit system was universal. Even England pioneered in the development of the technique of central control rather from greater need for it than because of superior intelligence or less laissez faire conservatism. The smallness of her gold reserve, the great extent of her international transactions, and certain unfortunate peculiarities in her banking structure, which made all the banks but one agreed that they had no responsibilities toward protection of the country's gold reserve, made control an urgent necessity for her sooner than for other countries.

In current discussions of the present plight of the gold standard, a sharp contrast is commonly drawn between its mode of operation before the war and its present erratic and arbitrary behavior. Before the war, it is claimed, the gold standard was an automatic mechanism, operating smoothly and beneficently to keep the world's economic structure on an even and balanced level, and its aberrations today are attributed to the abnormal political and economic disturbances and are expected to disappear when these disturbances cease. There is no

reasonable ground for denying that the strain to which the gold standard has been put in the last few years has been exceptionally great. But the idyllic picture sometimes painted of the mode of operation of the gold standard in the past is based wholly on conjectural history. The differences in this respect between the pre-war and the post-war period are altogether differences in degree rather than in kind, and some of these differences are to the advantage of the post-war period.

During the larger part of the nineteenth century, England was the only major country which adhered strictly and uninterruptedly to a metallic standard, and even England had had a long period of dalliance with a less respectable paper standard. The experience of England, as an adherent for the longest unbroken period to the gold standard, as a pioneer in attempts deliberately to "manage" or regulate its mode of operation, and, by its maintenance of the only important and completely free gold market, as in a sense the special custodian of the standard for the rest of the world, is especially significant for our purposes.

The Bank of England, at first as the sole issuer of paper money and the most important deposit bank, later under pressure of public opinion and in self-defense against the irresponsibility of the other

English banks, partially accepted the rôle of a central bank with some degree of special responsibility for the mode of operation of the English gold standard and especially for the protection of the convertibility of the English paper currency. The smallness of the usual English gold reserve, as I have already remarked, made such assumption of responsibility by some agency particularly urgent. But the Bank of England, until quite recent years, never publicly acknowledged that its responsibility went beyond the duty of maintaining the convertibility into gold upon demand of its own note issue; and its practice at times indicated that it did not even take this limited degree of responsibility with adequate seriousness. Its former method of selecting its governors from among its own directors by frequent rotation on a seniority basis, without respect to special fitness for this highly technical task, was not conducive either to the formulation of wise policies or to efficient and consistent execution of such policies as were adopted, and its record would indicate that the directors of one generation often had to learn over again the lessons in central bank management which sad experience had in a previous generation impressed upon their predecessors.

The Bank of England, moreover, was in its ori-

gin, in its constitution, and, for a long time, in its practice primarily a profit-seeking corporation, analogous in its objectives to any other bank owned and controlled by its shareholders. The task of regulating a currency is not in itself necessarily productive of income and may, if carried on solely with a view to the national interest, be destructive of the profits, and even the capital, of the regulating agency. Gold is always a non-income-earning asset. It was late in the nineteenth century before the nature of the profit-and-loss statement to be presented at the next annual meeting of the shareholders of the Bank, or the private business interests of the directors, clearly had ceased to be a major concern of its governors. As late as 1858 a responsible writer could explain a former case of glaring mismanagement by the Bank, when in the face of rampant speculation and a rapidly sinking gold reserve it had failed to raise its discount rate or take other precautionary measures, as due to the fact that "a sensible minority of the Board were overruled by an interested majority, some of whom became bankrupts during the crisis"; and could refer to this incident as still having relevance in attempts to interpret the activities of the Bank.[1]

[1] T. H. Williams, "Observations on Money, Credit, and Panics," *Transactions of the Manchester Statistical Society*, 1858, p. 60.

The spirit of laissez faire, which appears to persist longer and in more extreme form among bankers than in any other portion of the population, was a hostile factor also to the very idea of control. The currency and credit system, many bankers said, would operate best if bankers were left free and unregulated to pursue their private profits wherever they could find them. As one prominent banker put it: "Generally speaking, Providence has so constituted human society, that all banking companies, and all individuals too, will most effectually promote the public interests, when by honorable means they promote their own. If this is not the case with the Bank of England, it must have arisen from the Acts of the Legislature."[1]

In England, perhaps more than in other countries, age brings to institutions a prestige and a dignity which endow them with immunity from criticism and which serve to veil the less resplendent aspects of their history from the objective scrutiny of public opinion. This profit of antiquity accrued rather late, probably later than it was earned, to the Bank of England, but it finally did accrue before the end of the nineteenth century. The old lady of Threadneedle Street, very much

[1] J. W. Gilbart, *A Practical Treatise on Banking*, 1st American, from 5th English, ed. (New York, 1851), p. 92.

like the contemporaneous old lady on the throne, had become a symbol of the solidity, the glory, the far-flung interests, and the incorruptible and beneficent omnipotence of the British Empire.

It had by no means always been thus. The verdict which Ricardo delivered on the Bank of England directors of his time, "They are indeed a very ignorant set," was repeated, in effect, by later generations of economists and statesmen. If its critics were to be believed—and they found no difficulty in amassing damaging evidence—it had always been the duty of the Bank to regulate the currency; but it had often neglected to make any attempt to do so, and it generally bungled its job very badly when it did make the attempt. Its governors could never achieve a coherent and consistent formulation of the Bank's policy. At times they denied, with righteous irritation, that they had any policy; at other times, they confessed shamefacedly that they had no policy and asked parliament to devise one for them. Their one constant principle was to conceal from the public the nature and purpose of their operations and to shroud their activities in a veil of mystery. At the end of the century, their periodic reports to the public gave less information than those of fifty years before. With a gold reserve more open to sudden foreign demands and

more slender in relation to its credit superstructure than that of any other gold-standard country, the Bank of England finally did learn all the tricks and devices of credit control, but only after a succession of narrow escapes from disaster to the English gold standard. On at least five occasions prior to the war it was saved from an impending failure to meet claims upon it for gold only by the response of the Banque de France to its appeals for help. On one occasion it went begging to the other London banks to lend it their spare bank notes in order that it might replenish its exhausted reserves!

But whatever the faults of omission or of commission of the Bank of England, the pre-war English gold standard was a managed standard. In the nineteenth century it required constant management and unremittent attention merely to keep it a gold standard. Further management with a view to internal stabilization within the limits of the gold standard was a luxury which the Bank of England, with its narrow margin of surplus resources, could ordinarily not have afforded to indulge in, even if it had the desire. Time after time, it failed to take the necessary, and to later and even contemporary observers the obvious, action to meet a drain until disaster was impending. Macleod comments as follows on one of these instances: "Here

we have the same inveterate blunder committed by the Bank on so many previous occasions—an immense drain of bullion, and yet none but the most feeble, inefficient, and puerile means taken by the Bank to raise the value of money."[1] It did, after a time, relearn the principle, which it had for a time followed in the eighteenth century, of making money plentiful but dear during periods of acute credit stringency, and of making money both scarce and dear when speculation passed the danger point. Beyond this it made few ventures into the unexplored realm of credit management with a view to stabilization of prices or of industry. In other countries there was either no agency for such stabilization or no will to experiment with it. Central bankers were content if they could always remain prepared to meet any ordinary calls upon their gold reserves without drastic curtailment of the credit facilities which they provided to their customers. Further stabilization than this was outside the range of their activities or of their conception of their functions, and in any case was a responsibility which they were determined not to assume.

While recurrent stresses and strains have been a normal aspect of the operation of the gold stand-

[1] Macleod, *The Theory and Practice of Banking*, II, 306–7.

ard, it has been subjected during the post-war period to an exceptionally severe test, from which it is emerging a mutilated and sadly shrunken institution, with its prospects highly uncertain. An international institution in a nationalistic world, it has been ill-adapted to withstand the centrifugal forces generated by nations indulging themselves in new extremes of self-determination. The greatest source of danger to—and from—the gold standard was the acquisition by the United States and France of over 70 per cent of the world's monetary stock of gold and the failure of other countries to make any substantial inroads on these accumulations, or even to retain what gold was still left to them.

Under ordinary circumstances no country could acquire or retain a greatly disproportionate share of the world's gold supply. The accumulation of gold in bank reserves would tend to lead to lower discount rates. This would tend, in the first instance, to promote the export of short-term and long-term funds in search of higher rates of return, and thus to lead to at least a partial reflux of the gold to other countries. If gold reserves still continued unusually large, and discount rates unusually low, the volume of domestic credit would tend to increase, business transactions to expand in

number and volume, and internal prices to rise. These factors, in turn, would tend to stimulate imports and to restrict exports, and so to build up a sufficient excess of foreign debits over foreign credits to carry off some or all of the abnormal accumulations of gold. This mechanism has been operating during recent years, as always, but it encountered countervailing factors which neutralized, or more than neutralized, its force.

In the United States the failure of member banks, since 1922, to utilize freely their rediscount privileges with the Federal Reserve banks was one factor tending to prevent the increase in gold reserves from having its expected influence on the volume of business transactions and on the commodity price level. Much of the great increase in bank credit which did take place went into security and real estate speculation instead of into commerce; and while the prices of securities and of real estate assuredly rose, the expectation of a still further rise and the increase in call money rates which resulted from the increased volume of stock-market speculation, drew funds to this country instead of driving them out, as high commodity prices would have done. The American tariff, that lofty monument to American statesmanship, made it difficult for foreign commodities to penetrate the American

market. The government subsidies to American shipping narrowed the field of operations for foreign vessels. The growing world-wide demand for American machinery, automobiles, moving-picture films, and other special products of American mass-production, and the increasing payments to this country on account of the inter-Allied debts, were additional factors operating to keep the balance of payments favorable to this country and to make the American accumulation of gold grow still further, instead of shrinking. The large but irregular ventures of American capital into the foreign investment field and the European expenditures of the annual crop of American tourists alone operated to redress the balance in the opposite direction; and interest receipts on past investments were rapidly approaching the stage where they would surpass the volume of new investments. The traditional mechanism was operating, and in the traditional way, but alas, without accomplishing the traditional effects. Without deliberate aid from government or banking system, it was not powerful enough of itself to offset with sufficient rapidity the strong forces working in the opposite direction.

In France, likewise, there were special factors operating to increase the French stock of gold, and to keep it there indefinitely. The return to the

gold standard at what proved to be an unnecessarily low gold value for the paper franc; the deliberate adoption by the Banque de France and the French treasury of a policy of accumulating a gold reserve great enough to offer complete assurance that the gold standard, once restored, would be maintained forever; the hoarding of paper francs by the French public, with the consequent "sterilization" of the gold reserves behind them in so far as any influence on French commodity prices was concerned; the reluctance of the Frenchman, not yet forgetful of the sad outcome of his prewar foreign investments, to place his savings in foreign securities, regardless of how great the promised extra yield of interest might be; the administrative restrictions on the flotation of foreign capital issues in the Paris market, and the prohibitive taxes on the income from foreign securities; the great revenue from the annual influx of foreign tourists; the successive increases in the French tariff—all of these factors combined to enable France to accumulate and to retain a huge stock of gold.

For other countries on the gold standard this maldistribution of gold meant inadequate gold reserves, a constant threat to the integrity of their currencies, and a deflationary pressure on their

prices in spite of embarrassingly rigid labor and other costs and inflexible internal and external public-debt burdens. The extraordinarily great volume of international capital movements operated at times, when they were in the right direction, to relieve the strain and to postpone the inevitable crisis. But these capital movements, and especially the American contribution thereto, were less dependable, more capricious, than the corresponding pre-war capital movements; and an undue proportion of them were short-term loans subject to sudden call. Furthermore, in the disturbed state of internal and international politics which has been the outstanding feature of post-war European history, at any moment a country might be subjected to a heavy flight abroad of the capital of its own nationals, seeking elsewhere the security from the menace of political revolution and economic collapse which they could not find at home. To add further to the woes of Europe, a heavy and growing burden of reparations and inter-Allied debts was payable in terms of gold currency at a time when rising tariffs and falling prices made their liquidation in goods increasingly difficult.

In England, rigid wages; a relative lack of progress in English industrial technology; the progressive exhaustion of the coal mines; the development

of new foreign competition for her staple textile and steel industries; foreign tariffs, and preferential legislation in favor of national mercantile marines; boycotts in India and China; a crushing debt burden; the return to the gold standard at too low a mint price of gold in terms of sterling; an excessive export of capital, due in part to internal lack of confidence in England's economic and political future; and the reluctance of the Bank of England to relieve the pressure on her gold reserve at the cost of raising the discount rate and thus still further impairing the prospects of a recovery of internal prosperity—all of these factors combined to make the gold standard a difficult burden to bear. In debtor countries, fiscal extravagance and too rapid an expansion in industrial facilities, often financed largely by foreign short-term borrowings, contributed to the unhealthy and overstrained condition of their international balances.

Finally, an extraordinary collapse in world price levels, initiated by the termination of the new economic era in the United States and carried farther and farther downward by the competitive struggle of banks for liquidity and for protection of their reserves at whatever cost to the rest of the economic structure; a sudden cessation of the flow of new capital from creditor to debtor countries and a

withdrawal of previously made short-term investments; a continuing burden of inflexible reparations, debt, and interest payments; a contagious plague of tariff increases, import prohibitions, and import quotas; a further decline in world price levels and in the volume of trade; then a succession of flights from the crown, the mark, the florin, and the pound sterling: and the gold standard, strained beyond the breaking point, crashed.

The gold standard was, of course, not responsible for all these difficulties of a world not yet fully recovered from the economic and political distempers bred by the war and the peace treaties. A debtor country whose foreign debts were in terms of gold currencies could not have escaped balance-of-payment difficulties by the simple process of abandoning the gold standard. But it seems to me indisputable that the anarchic way in which the gold standard has been operating has been an accentuating factor, and that any country, even a debtor country with foreign obligations payable in terms of gold, could have undergone the stresses and strains of the post-war period with a lesser degree of suffering and could have emerged from it with everything that really matters, except its monetary prestige, in better condition, if it had

had a well-regulated paper currency instead of adhering to the world's ill-regulated gold standard.

Questionable as is the pre-war record of the gold standard as an international standard, desperate as is its post-war record, I see no valid grounds for optimism as to its mode of operation in the immediate future, even when, or if, the present impasse ends. In pre-war years England was in most respects the custodian—the manager, if you like the term—of the international gold standard. Possessed of the world's largest stock of capital available for long-term foreign investments, which, after an initial period of experience of the costs of reckless speculation, she finally learned to administer conservatively; maintaining open world-markets for gold, for foreign exchange, and for short-term funds, absolutely free from diplomatic control and Treasury manipulation; operating on the basis of gold reserves which a persistent dislike of non-income-earning assets made extraordinarily small: England was for the rest of the world a good administrator of the gold standard—better in fact than she was for herself. There was already, moreover, some measure of international co-operation between central banks; and a proposal made in 1908 by Luzzati, the Italian minister of finance, for an international entente between

central banks and national treasuries, which would make permanent and obligatory the financial aid which different banks had in the past occasionally rendered to each other, was as sympathetically received as it would be today, and had as little concrete result. The financial decline of England, the rise of the United States in international commerce and finance, the financial strength and the surplus gold stocks of the United States and France, have, for the time being, deprived England of her rôle of leadership and have transferred it to France and our own country. Can they be expected, on the basis of their past records and present attitude and policies, to fill this important rôle as creditably as has England? I fear not.

In the United States the dominance of parochialism in national matters and of isolationism in international affairs acts to prevent our central bankers and our government from recognizing, except surreptitiously, the existence of other central banks and other governments with whom we share mutual interests, if only we and they can be brought to realize it. Our central banking organization is overcomplex, too decentralized, and too much subject to regional pressure to act quickly and decisively in the international sphere. Moreover, while it is less reticent about its own activities than are

other central bank agencies, the Federal Reserve Board has revealed to the outsider no greater capacity to formulate a consistent policy, unless a program of drift, punctuated at intervals by homeopathic doses of belated inflation or deflation and rationalized by declarations of impotence, can be accepted as the proper constituents of central bank policy. While the New York Federal Reserve Bank has made more effort than any other central banking institution to develop a program and a technique of credit control with a view to stabilization, it has at critical moments found itself at cross-purposes with, and inhibited from action by, a Federal Reserve Board with an attitude toward its functions resembling with almost miraculous closeness that of the Bank of England during its worst period. Even the New York Bank, moreover, has apparently been operating on the basis of a defective and naïve theory of monetary stabilization of its own concoction. Our investors and bond salesmen are novices still in the field of international finance—how much so being strikingly demonstrated by the surprised consternation shown by the American investor when he discovered that Latin-American governments do not unduly strain themselves to meet their external debt obligations. A great domestic field for investment which offers

highly fluctuating prospects of profits from year to year tends to make the outward flow of American capital subject to violent ebbs and flows, with disastrous consequences to debtor countries. Our tariff indirectly places obstacles in the way of liquidation of foreign obligations to us by the normal method of sales of their products in our market. Our conservatives, moreover, are hostile to the idea of American capital serving foreign industries, and our liberals tend to oppose foreign investment as an instrument of exploitation of foreign peoples. Our interest rates are comparatively high, and our bankers' commissions are superlatively so.

With respect to France most of the obvious defects, from the point of view of debtor countries, in her post-war manner of conducting her international financial affairs can fairly be attributed to the influence of temporary circumstances, with whose passing these defects could be expected also to disappear. The disproportionate extent, for instance, to which French post-war investments abroad were short-term rather than long-term, was clearly the result of a temporary situation. The Banque de France accumulated short-term funds abroad as a preliminary stage in building up her gold reserve, and withheld from converting them into gold partly at least out of consideration for

the plight of other central banks. The private banks in France placed large funds on short-term loan abroad, because they anticipated early need for them at home, and withdrew them only as that need actually developed or as their confidence in the political or economic stability of foreign countries evaporated. The administrative and fiscal restrictions on investment in foreign securities arose mainly out of temporary political and financial conditions and out of the desire to protect a cherished gold standard which had been recovered only after great effort, and whose fragility the French tended to exaggerate, and these restrictions had already undergone some degree of moderation when the world depression made its appearance.

There is, however, one questionable aspect of France's conduct as a creditor country, which is of long standing and has been brought into even sharper prominence during the last two years, namely, the exploitation by the French government for diplomatic purposes of France's creditor position. Even before the war France had made entrance into alliance with her or exit from a hostile alliance, the award of munitions contracts to French firms, or the modification of liquor legislation, the price of access to her long-term capital market; had used sudden withdrawals of short-term funds

and newspaper and Bourse campaigns against the credit of other countries as a means of exerting political pressure; and had proved herself a harsh and insistent creditor when weak debtors were delinquent in meeting their obligations. She is pursuing the same policy of making her financial strength a support for her diplomacy more openly and more vigorously today. Except to her political and military allies, France is a dangerous creditor, and countries whose policies may conceivably come into conflict with French ambitions will be wary of becoming indebted to her except in the last extremities of financial distress.

The optimist, of course, can imagine certain possible developments which will favor a better functioning of the gold standard in the future than it has displayed in the immediate past. Every economic institution in our capitalistic society appears at its worst during a severe and world-wide economic depression. The reduction or cancellation of reparations and inter-Allied debts; less reliance on short-term loans as means of financing long-term undertakings; a more cautious and less irresponsible procedure in the flotation of international loans—all of these would tend to reduce the strains on gold movements as an ultimate equilibrating device. An increase in the volume and elas-

ticity of international trade resulting from a progressive reduction of tariff and other barriers to commerce would make the liquidation of international financial obligations of a given amount a lesser burden on the mechanism of international equilibrium. The economic and financial recovery of England and her return to the gold standard would constitute an important stabilizing factor for the rest of the gold-standard world. Finally, a restoration of international confidence and good will and a return of internal political stability in those countries where it is now lacking would remove the disturbing influence of outside attacks on and internal flights from the credit of particular countries.

Mild optimism, however, is an insipid brew. To be really exhilarating, optimism should be taken in strong doses. The gold standard, at previous critical stages of its history, was able successfully to invoke miracles to keep the breath of life in it. In the middle of the last century the gold discoveries in California and Australia, and in the late 1890's the Klondike discovery and the invention of the cyanide process of extracting gold, came to the rescue of the threatened gold standard at the exact melodramatic moments. Today we hear of the discovery of marvelous new gold mines in Sweden, in Africa, and in New Guinea, and of the surren-

der by India of her tremendous hoards of gold, which, if one still believes in miracles, will replenish the shrunken gold reserves of Europe, check the decline in prices, bring back prosperity, and, more important, restore the gold standard to its alleged former grandeur and glory.

The confirmed optimist will carry his fantasies still farther. There may come a day when there will be systematic and organized international co-operation in the management of the gold standard. When that day arrives, the world-value of gold will be stabilized, the rich countries will cheerfully and quickly come to the aid of the poor, gold resources will be equitably shared all around according to need rather than greed, and each central bank will have an interest in protecting the gold reserves of other countries against temporary but dangerous drains second only to its interest in protecting its own reserve.

The need for such developments in international co-operation has long been recognized. Alfred Marshall, in a moment of restrained optimism, predicted that the day was coming when we would have it. He said:

I think that there is a real, though very slow-moving, tendency for national interests to overrule provincial interests, and international interests to overrule national, and I think the

time will come when it will be thought as unreasonable for any country to regulate its currency without reference to other countries as it will be to have signalling codes at sea which took no account of the signalling codes at sea of other countries.[1]

That prediction was made over forty years ago, and the motion toward its fulfilment has been so slow that the progress made is scarcely visible to the naked eye. Marshall made similar predictions about the growth of sanity in tariff matters, but lived long enough to see even England take the first steps back to protection. It is true that we have today some preliminary stages of organization for international co-operation. We have the League of Nations, the International Bank, the frequent meetings of central bankers. But the genuine spirit of international co-operation which will give to these admirable institutions the power to act and the courage to use that power are still lacking. These would be splendid organs of international financial co-operation if their membership did not consist entirely of ordinary non-co-operative nations.

My respect for traditional doctrines and ancient institutions has so far led me, I am afraid, to give too sympathetic an account of the way in which

[1] Evidence before the Gold and Silver Commission, 1887, reprinted in Marshall, *Official Papers*, p. 135.

the gold standard has functioned. Let me try to set the balance right. A country on the gold standard binds itself to all the vagaries of gold as a standard of value. The main criterion for a standard of value is stability. As Irving Fisher has shown, the price of gold has been less stable than the price of eggs. A standard of value fluctuating erratically in its own value must be an important factor in initiating and in accentuating the recurrent cycles of expansion and depression from which the modern world has suffered. For over a century writers have pleaded for the abandonment of the gold standard and the substitution of a managed paper currency, stabilized in terms of wholesale commodity prices, or of the wages of labor, or of the price of wheat, or of the cost of living, or of the volume of outstanding credit. They have conceded that external stability must be sacrificed if internal stability is to be gained, but they have insisted that the latter is for most, if not for all, countries by far the more important. They have really conceded too much to the gold standard when they admitted that it brought external stability, for the only stability guaranteed by even a universal gold standard is a stability in exchange rates, a very different and much more limited thing than stability in external purchasing power.

There is a great skepticism even among the experts as to the possibility of any scheme of stabilization. Some of them would agree with the 1840 statement of Cobden, the great apostle of laissez faire, that "managing the currency" was "just as possible as the management of the tides, or the regulation of the stars or the winds." Some distinguished economists—distinguished especially for their capacity to disagree with their professional colleagues—dispute the desirability of stabilization even if it were practicable, and find sufficient merits even in depression periods such as the present to be reluctant to part with them. There is the great difficulty that stabilization requires stabilizers, and these must be either central bankers or ministers of finance. A century of central bankers has been in agreement that stabilization was altogether beyond their powers. A century of economists has agreed with them to this extent, that with politicians and central bankers as in the past either nature or nurture has fashioned them, it was better to trust to gold than to an inconvertible currency managed by them. In England the Act of 1844, which until the war governed the English currency, was once correctly characterized as a "legislative declaration of the incompetence of central bankers to manage even a gold currency." It

escaped being a rigid formula depriving the Bank of England of any discretion only through incompetence on the part of the legislators, who overlooked the fact that deposits-and-checks were also a part, and the predominant part, of the currency, and thus left them free from the legislative strait-jacket which they imposed on paper money. Some economists seek an avenue of escape, both from the frying-pan of the unmanaged gold standard and the fire of currency-management by central bankers, in a rigid formula of the Act of 1844 type, which would leave little or no opportunity to the central banker to exercise his discretion.

If I may express an individual view, we know too little as yet of the possibilities of stabilization to take immediately any major steps in that direction. The hostility of central bankers and the menace of political control are genuine and important factors in the situation. The gold standard is a wretched standard, but it may conceivably be the best available to us. Its past record, bad as it is, is not necessarily conclusive in this respect, as the only alternatives which have actually been tried have, on the whole, had an incomparably worse record. But we won't know the possibilities of alternative currency systems until we try them, and both the prevailing atmosphere and prevailing

conditions are favorable to cautious experimentation. We could soon learn a great deal more than is now known of the possibilities of comprehensive stabilization, if some country now off the gold standard were to attempt by credit control or otherwise to raise its price level somewhat above its present level, and then were to regulate the volume of bank credit so as to approximate a constant level in some significant index of prices. As far as concerns the United States our gold reserves are still so far in excess of our minimum needs on the basis of the present level of prices and of business activity that, with minor changes in our legal gold reserve requirements, we can go sufficiently far in experimenting with the possibilities of stabilization without imperiling our continued adherence to the gold standard. Such an experiment would require co-operation by the federal government and the Federal Reserve System in formulating objectives, making them known to the public, and making unquestionable their determination to carry out all the steps—expansionist at this time, contractionist at other times, when circumstances are different—necessary to attain those objectives. Such an experiment, I believe, would offer good prospects of dealing with the problem in a more constructive and more effective manner than such

devices for revivifying dead assets, justified and even essential though they may be in the present emergency, as the Reconstruction Finance Corporation, devices which suggest the technique of that king of ancient Egypt of whom Herodotus speaks, who, when a financial panic raged in Egypt, when creditors pursued their debtors and all other assets had lost their virtue as security for loans, issued an edict requiring bankers to accept from would-be borrowers the mummies of their deceased ancestors as adequate collateral for loans. This is a time, I repeat, for all its good friends to support cautious experiment, in the hope that something can still be made of the gold standard. Alternative standards, under perfect management, offer better prospects. But given the necessity of reconciling ourselves to the persistence of management which falls far short of perfection, and of knowledge still far from complete as to the proper objectives and technique of even perfect management, it seems wise policy for countries still on the gold standard to exploit more fully its possibilities of service before abandoning it as utterly incorrigible. But the gold standard has rightly been put on the defensive, and only substantial assurance of better performance in the future than in the past will entitle it to a new lease of life.

MONEY AND THE BUSINESS CYCLE

By Gottfried Haberler

MONEY AND THE BUSINESS CYCLE

I

If I speak of the business cycle during this lecture I do not think only or primarily of such financial and economic earthquakes as we have experienced during the last few years all over the world. It would perhaps be more interesting to talk about these dramatic events—of speculation, brokers' loans, collapse of the stock exchange, wholesale bankruptcies, panics, acute financial crises of an external or internal sort, gold drains, and the economic and political repercussions of all this. I shall, however, resist the temptation to make what I have to say dramatic and shall try instead to get down to the more fundamental economic movements which underlie those conspicuous phenomena which I have indicated.

For a complete understanding of the business cycle it is absolutely indispensable to distinguish between a primary and fundamental and a secondary and accidental movement. The fundamental appearance of the business cycle is a wavelike movement of business activity—if I may be allowed to use for the moment this rather vague ex-

pression. The development of our modern economic life is not an even and continuous growth; it is interrupted, not only by external disturbances like wars and similar catastrophes, but shows an inherent discontinuity; periods of rapid progress are followed by periods of stagnation.

The attention of the economists was first caught by those secondary and accidental phenomena—glaring breakdowns and financial panics. They tried to explain them in terms of individual accidents, mistakes, and misguided speculations of the leaders of those banks and business firms which were primarily involved. But the regular recurrence of these accidents during the nineteenth century brought home to the economists that they had not isolated accidents before them but symptoms of a severe disease, which affects the whole economic body.

During the second half of the nineteenth century there was a marked tendency for these disturbances to become milder. Especially those conspicuous events, breakdowns, bankruptcies, and panics became less numerous, and there were even business cycles from which they were entirely absent. Before the war, it was the general belief of economists that this tendency would persist and that such dramatic breakdowns and panics as the nineteenth

century had witnessed belonged definitely to the past.

Now, the present depression shows that we rejoiced too hastily, that we have not yet got rid of this scourge of the capitalistic system.

But, nevertheless, so much can be and must be learned from the experience of the past: if we want a deeper insight into the inner mechanism of our capitalistic system which makes for its cyclical movements, we must try to explain the fundamental phenomenon, abstracting from these accidental events, which might be absent or present.

If we disregard these secondary phenomena, the business cycle presents itself as a periodic up and down of general business activity, or, to put it now in a more precise form, of the volume of production. The secular growth of production does not show a continuous, uninterrupted trend upward but a wavelike movement around its average annual increase. It does not make a great difference whether the downward swings of these business waves are characterized by an absolute fall of the volume of production or just by a decrease of the rate of growth.

In this lecture I am not concerned with the ingenuous devices which statisticians have invented to isolate the cyclical movements from other pe-

riodic or erratic movements on which they are superimposed, or which are superimposed on them. I assume, first, that we have such a thing as a business cycle, which is not identical with seasonal movements within the year and erratic irregular disturbances caused by wars, periods of government inflation, and the like; it is necessary to state this, because even the existence of the phenomenon under consideration has been doubted. Secondly, I assume that we have been able to isolate this movement statistically.

Our chief concern will be with the explanation of this movement and especially with the rôle of money in the widest sense of the term, including credit and bank money.

II

There is hardly any explanation of the business cycle—I hesitate a little to say "theory of the business cycle," because many people have developed a certain prejudice against this term—in which the monetary factor does not play a very decisive rôle. The following consideration shows that this must necessarily be so: Still abstracting from the previously mentioned accessory phenomena, one of the most outstanding external symptoms of the business cycle is the rise of prices during prosperity

and the fall of prices during depression. On the other hand, there is an increase of the volume of production during the upward and a decrease during the downward swing. But not only more commodities are produced and sold but also in other branches of the economy there is an increase of transactions—e.g., on the stock exchange. Therefore, we can safely say there is a considerable increase of the volume of payments during the upward swing of the cycle and a distinct decrease of this volume during depression.

Now, it is clear that, in order to handle this increased volume of payments, an augmentation of the means of payment is necessary—means of payment in the widest sense of the term. One of the following things must happen:

a) An increase of gold and legal tender money.

b) An increase of banknotes.

c) An increase of bank deposits and bank credits.

d) An increase in the circulation of checks, bills, and other means of payment which are regularly or occasionally substituted for ordinary money.

e) An increase of the velocity of circulation of one or all of these means of payments.

I do not claim that this enumeration is exhaustive or quite systematic. It is largely a matter of terminological convenience, as one likes to express

one's self. One writer prefers to call bank deposits, on which checks may be drawn, money, bank money, credit money. Other writers restrict the term "money" to legal-tender money and speak then of bank deposits as means to save money or to make it more efficient in making payments by increasing its velocity of circulation. Still others have an aversion against the term "velocity of circulation" and prefer to speak of changes in the requirement for money and means of payment.

Without going more deeply into these technical details, it is, I hope, clear that there must occur in one way or another during the upward swing of the cycle an expansion of the means of payment and during the downward swing a corresponding contraction.

No serious theory, no explanation of the cycle, can afford to overlook, disregard, or deny this fact. Differences can arise only (*a*) in respect to the particular way in which the expansion takes place—whether it is primarily an increase in the quantity of credit money or legal-tender money or gold or just of the velocity of circulation of one of these—and (*b*) as to the causal sequence.

As to the causal relation, broadly speaking, two possibilities seem to be open:

1. One might assume that the impulse comes

from the side of money, that the circulation is expanded by a deliberate action of the banks or other monetary authority, and that this sets the whole chain of events going, or

2. One may hold the opinion that the monetary authorities take a passive rôle; that the initiative comes from the commodity side, that changes of demand for certain commodities, changes in the structure of production, inventions and improvements, large crops, or psychological forces, a wave of optimism and pessimism—that one of these phenomena and its repercussions makes for an increase or decrease of the volume of production, and that this, in turn, draws into circulation a greater amount of means of payment. The greater flow of goods induces a larger flow of money.

The theories of the first group, which maintain that the active cause of the cycle lies on the side of money, may be called "monetary theories" of the business cycle. In a wider sense, however, we may include in the group of monetary theorists also all those who admit that the impulse might also come from the commodity side, but hold that an appropriate policy of the monetary authorities, an effective and elastic regulation of the volume of the circulating medium, can forestall every serious disturbance.

As you all know, the most frequently recommended criterion for such a policy is the "stabilization of the price level" in the one or other of the many meanings of this ambiguous term. You all will agree that it is impossible to discuss this problem exhaustively in one hour. So I shall confine myself to pointing out the insufficiencies of this type of monetary theory and of its recommendations for the remedy of the business cycle, which center around changes in the price level. I shall try, then, to indicate a more refined monetary theory of the cycle, which has been developed in the last few years, although it is not so well known in this country as it deserves to be. This refined theory seems to explain some features of the cycle, especially of the last one, which are not entirely compatible with the cruder form of the monetary approach, which identifies monetary influences with changes in the general price level.

III

The traditional monetary theory, which is represented by such well-known writers as the Swedish economist Professor Cassel and Mr. Hawtrey of the English treasury, regards the upward and the downward swing of the business cycle as a replica of a simple government inflation or defla-

tion. To be sure, it is—as a rule—a much milder form of inflation or deflation, but at the root it is exactly the same. Mr. Hawtrey states this quite uncompromisingly in his famous dictum: "The trade cycle is a purely monetary phenomenon" and is, in principle, the same as the inflation during the war and the deflation, that is to say, the reduction of the amount of circulating medium, which was deliberately undertaken by certain governments to approach to or to restore the pre-war parity of their currencies.

Hawtrey recognizes and stresses, of course, the difference in degree between the two types of inflation and deflation, namely, that the expansion and contraction in the course of the business cycle is chiefly produced by maladjustment of the discount rate, which is not the way in which a government inflation is brought about. It is today an almost generally accepted doctrine, that a lowering of the discount rate by the banking system, especially by the central banks, induces people to borrow more, so that the amount of the circulating medium increases and prices rise. A raising of the discount rate has the opposite effect—it tends to depress prices or, if they were rising, to put a brake on the upward movement. I know, of course, that this bare statement needs some qualifications. I

trust, however, that before so competent an audience it will suffice to say that this is literally true only if the influence of the change in the discount rate is not compensated by any other force which changes the willingness of business men to borrow. But, given all these other circumstances, that is to say, *ceteris paribus*, a change in the discount rate will have the indicated effect on prices. In any given situation there is one rate which keeps the price level constant. If the rate is forced below this equilibrium rate, prices have a tendency to rise; if the rate is raised above the equilibrium rate, prices tend to fall.

Now, according to Mr. Hawtrey, there is a tendency in our banking system to keep the interest rate too low during the upward swing of the cycle; then prices rise, we get a credit inflation, and sooner or later the banks are forced to take steps to protect their reserves—they increase the rate and bring about the crisis and the depression.

There is no time here to go into details, to discuss the ingenious explanation which Mr. Hawtrey offers for the fact that banks always go too far, that they swing like a pendulum from one extreme to the other and do not stop at the equilibrium rate. The reason which Mr. Hawtrey gives for this is different from the one which Professor Irving

Fisher and other writers of this group have to offer. What they all have in common is that the disturbing factors act through changes of the price level. It is through changes of the price level that expansion and contraction of credit and money act upon the economic system, and they all believe that stability of the price level is the sufficient criterion of a rational regulation of credit. If it were possible to keep the price level stable, prosperity would never be followed by depression. If the price level has been allowed to rise and the inevitable reaction has come, it would be possible to end the depression and to restore equilibrium, if one could stop the fall of prices.

Let me now indicate briefly why this explanation seems to me insufficient. Or, to put it in other words, I shall try to show that (*a*) the price level is frequently a misleading guide to monetary policy and that its stability is no sufficient safeguard against crises and depressions, because (*b*) a credit expansion has a much deeper and more fundamental influence on the whole economy, especially on the structure of production, than that expressed in the mere change of the price level.

The principal defect of those theories is that they do not distinguish between a fall of prices which is *due to an actual contraction* of the circulating me-

dium and a fall of prices which is caused by *lowering of cost* as a consequence of inventions and technological improvements. (I must, however, mention that this particular criticism does not apply to Mr. Hawtrey, who, by a peculiar interpretation of the term "price level," recognizes this distinction, although he does not seem to draw the necessary conclusions.)

It is true, if there is an absolute decrease of the quantity of money, demand will fall off, prices will have to go down, and a serious depression will be the result. Normal conditions will return only after all prices have been lowered, including the prices of the factors of production, especially wages. This may be a long and painful process, because some prices, e.g., wages, are rigid and some prices and debts are definitely fixed for a long time and cannot be altered at all.

From this, however, it does not follow that the same is true if prices fall because of a lowering of costs. It is now generally accepted that the period preceding the present depression was characterized by the fact that many technological improvements, especially in the production of raw materials and agricultural products, but also in the field of manufacture, took place on a large scale.

The natural thing in such a situation would be

for prices to fall gradually, and apparently such a fall of prices cannot have the same bad consequence as a fall of prices brought about by a decrease of the amount of money. We could speak, perhaps, of a "relative deflation" of the quantity of money, relative in respect to the flow of goods, in opposition to an "absolute deflation."

Especially, those writers who stress the scarcity of gold as a cause for the present depression are guilty of overlooking the radical difference between an *absolute* and a *relative* deflation. A scarcity of gold could result only in a *relative* deflation, which could never have such disastrous results as the present depression. Of a more indirect way in which the "smallness" of the annual output of gold has perhaps to do with—I do not venture to say "is the cause of"—the acuteness of the present depression and the vehemence of the price fall, I shall say more later.

Now, as I said already, during the years 1924–27 and 1928 we experienced an unprecedented growth of the volume of production. Commodity prices, on the other hand, as measured by the wholesale price index, were fairly stable, as everybody knows. From this it follows, and direct statistical investigations have verified it, that the volume of the circulating medium had been increased. We could

say, there was a "relative inflation," that is, an expansion of means of payment, which did not result in an increase of commodity prices, because it was just large enough to compensate for the effect of a parallel increase of the volume of production.

There is now an obvious presumption that it was precisely this relative inflation which brought about all the trouble. If this were so—and it seems to me that it is very probable—it would be plain that the price level is a misleading guide for monetary policy and that there are monetary influences at work on the economic system that do not find an adequate expression in a change of the price level, at least as measured by the wholesale price index. And, in fact, there are such very far-reaching influences of certain monetary changes on the economic system—they may express themselves in a change of the price level or not—which have been wholly overlooked by the traditional monetary explanation, although the external symptoms of this influence have been well recognized (but differently interpreted) by certain non-monetary theories and descriptive studies of the business cycle.

IV

These changes, which I have in mind and shall now try to analyze, are changes of, what I shall call, *the vertical structure of production*, brought about by changes in the supply of credit for productive purposes. If we have to analyze an economic system, we can make a horizontal or vertical cross-section through it. A horizontal cross-section would exhibit different branches or lines of industry as differentiated by the consumption goods, which are the final result of these different branches: there, we have the food industry, including agriculture, the clothing industry, the shoe industry, etc. Industries which produce producer's goods—say, the iron and steel industry—belong simultaneously to different branches in this horizontal sense, because iron and steel are used in the production of many or of all consumer's goods. The old statement that a *general* overproduction is unthinkable, that we can never have too much of all goods, because human wants are insatiable, but that serious disproportionalities might develop in consequence of a partial overproduction—this statement relates principally to the horizontal structure of production. Disproportionality in this sense means that, for one reason or another, the appropriate proportion of productive resources de-

voted to different branches of industry has been disturbed—that, e.g., the automobile industry is overdeveloped, that more capital and labor has been invested in this industry than is justified by the comparative demand for the product of this industry and for other industrial products. I hope it is now pretty clear what I mean by horizontal structure and horizontal disproportionalities of production.

We make, on the other hand, a vertical cross-section through an economic system, if we follow every finished good, ready for consumption, up through the different phases of production and note how many stages a particular good has to pass through before it reaches the final consumer. Take, e.g., a pair of shoes and trace its economic family tree. Our path leads us from the retailer via the wholesale merchant to the shoe factory; and, taking up one of the different threads which come together at this point, say, a sewing machine used for the fabrication of shoes, we are led to the machine industry, the steel plant, and eventually to the coal and iron mine. If we follow another strand, it leads us to the farm which bred the cattle from which the leather was taken. And besides, there are many intermediate stages interpolated between these major phases of the produc-

tive process, namely, the various transportation services. Every good has to pass through many successive stages of preparation before the finishing touches are applied and it eventually reaches the final consumer. It takes a considerable length of time to follow one particular piece through this whole process, from the source of this stream to the mouth where it flows out and disappears in the bottomless sea of consumption. But, when the whole process is once completed and every one of the successive stages is properly equipped with fixed and circulating capital, we may expect a continuous flow of consumer's goods.

Now, in the equipment of these successive stages of production, the capital stock of a country, which has been accumulated during centuries, is embodied. The amount of accumulated capital is a measure of the length of the stream. In a rich country the stream of production is very long, and goods have to pass through many stages before they reach the consumer. In a poor country this stream is much shorter, and the volume of output correspondingly smaller. If, during a time of economic progress, capital is accumulated and invested, new stages of production are added, or, in technical economic parlance, the process of production is lengthened, it becomes more roundabout. If you

compare the way in which we produce today with the methods of our fathers, or the productive process of a rich country with the one of a poor country, innumerable examples can be found.

But what has this to do with the business cycle? Now, when I spoke of the vertical structure of production and the influence of monetary forces upon it, I thought of a lengthening and shortening of the productive process. Obviously, just as there must be a certain proportion between the different horizontal branches of industry, there must also be a certain relation of the productive resources—labor and capital—which are devoted to the upper and lower stages of production respectively, to the current production of consumer's goods by means of the existing productive apparatus, and to the increase of this apparatus for the increased future production of consumer's goods.

If, e.g., too much labor is used for lengthening the process and too small an amount for current consumption, we shall get a maladjustment of the vertical structure of production. And it can be shown that certain monetary influences, concretely, a credit expansion by the banks which lowers the rate of interest below that rate which would prevail, if only those sums, which are deliberately saved by the public from their current income, come

on the capital-market—it can be shown that such an artificial decrease of the rate of interest will induce the business leaders to indulge in an excessive lengthening of the process of production, in other words, in overinvestments. As the finishing of a productive process takes a considerable period of time, it turns out only too late that these newly initiated processes are too long. A reaction is inevitably produced—how, we shall see at once—which raises the rate of interest again to its natural level or even higher. Then these new investments are no longer profitable, and it becomes impossible to finish the new roundabout ways of production. They have to be abandoned, and productive resources are returned to the older, shorter methods of production. This process of adjustment of the vertical structure of production, which necessarily implies the loss of large amounts of fixed capital which is invested in those longer processes and cannot be shifted, takes place during, and constitutes the essence of, the period of depression.

Unfortunately, it is impossible to discuss here all the steps of this process and to compare them with the corresponding phases of the business cycle of which they are the picture and explanation. I hope it will be possible to give you a clear idea of what

happens in our capitalistic societies during the business cycle by means of a comparison with a corresponding event in a communistic economy.

What the Russians are doing now, or trying to do—the five-year plan—is nothing else but an attempt to increase by a desperate effort the roundaboutness of production and, by means of this, to increase in the future the production of consumer's goods. Instead of producing consumer's goods, with the existing primitive methods, they have curtailed production for immediate consumption purposes to the indispensable minimum. Instead of shoes and houses they produce power plants, steel works, try to improve the transportation system, in a word, build up a productive apparatus which will turn out consumption goods only after a considerable period of time.

Now, suppose that it becomes impossible to carry through this ambitious plan. Assume the government comes to the conclusion that the population cannot stand the enormous strain, or that a revolution threatens to break out, or that by a popular vote it is decided to change the policy. In any such case, if they are forced to give up the newly initiated roundabout ways of production and to produce consumer's goods as quickly as possible, they will have to stop the building of their

power plants and steel works and tractor factories and, instead of that, try to produce hurriedly simple implements and tools to increase the output of food and shoes and houses. That would mean an enormous loss of capital, sunk in those now abandoned works.

Now, what in a communistic society is done upon a decision of the supreme economic council is in our individualistic society brought about by the collective but independent action of the individuals and carried out by the price mechanism. If many people, individuals or corporations, decide to save, to restrict, for some time, their consumption, the demand for and production of consumer's goods declines, productive resources are shifted to the upper stages of production, and the process of production is being lengthened.

If we rely on voluntary saving we can assume that during every year approximately the same proportion of the national income will be saved—although not always by the same individuals. Then we have a steady flow of savings, and the adjustment of production does not take place in terms of actual shifts of invested productive resources but in terms of a lasting deflection of the flow of productive resources into other channels.

There is no reason why this should not go on

smoothly and continuously. Violent fluctuations are introduced by the influence of the banks in this process. The effect of the voluntary decision of the public to save, i.e., to divert productive resources from the current production of consumption goods to the lengthening of the process, can be produced also by the banking system. If the banks create credit and place it at the disposal of certain business men who wish to use it for productive purposes, that part of the money stream, which is directed to the upper stages of production, is increased. More productive resources will be diverted from the current production of consumer's goods to the lengthening of the process than corresponds to the voluntary decision of the members of the economic community. This is what economists speak of as forced saving. First everything goes all right. But very soon prices begin to rise, because those firms who have got the new money use it to bid away factors of production—labor and working capital—from those concerns which were engaged in producing consumption goods. Wages and prices go up, and a restriction of consumption is imposed on those who are not able to increase their money income. If through previous investment of voluntary savings there is already a tendency for the price level to fall, the new credit in-

stead of resulting in an absolute rise of prices may simply offset the price fall which would otherwise take place.

But, after some time, a reaction sets in, which tends to restore the old arrangement that has been distorted by the injection of money. The new money becomes income in the hands of the factors which have been hired away from the lower stages of production, and the receivers of this additional income will probably adhere to their habitual proportion of saving and spending, that is, they will try to increase their consumption again.

If they do this, the previous proportion of the money streams directed to the purchase of consumer's goods and of producer's goods will be restored. For some time it might be possible to overcome this countertendency and to continue the policy of expansion by making new injections of credit. But this attempt would lead to a progressive rise of prices and must be given up sooner or later. Then the old proportion of demand for consumer's goods and producer's goods will be definitely restored. The consequence is that those firms in the lower stages of production, which had been forced to curtail their production somewhat, because factors have been hired away, will in turn be able to draw away productive resources from the higher stages.

The new roundabout ways of production, which have been undertaken under the artificial stimulus of a credit expansion, or at least a part of them, become unprofitable. They will be discontinued, and the crisis and depression has its start. It could be otherwise only if the new processes were already finished when the additional money has become income and comes onto the market for consumer's goods. In this case, the additional demand would find additional supply; to the increased flow of money would correspond an increased flow of goods. This is, however, almost impossible, because, as Mr. Robertson has shown, the period of production is much longer than the period of circulation of money. The new money is bound to come on the market for consumption goods much earlier than the new processes are completed and turn out goods ready for consumption.

V

This explanation of the slump, of which I have been able to indicate here only the bare outline, could, of course, be elaborated and has been elaborated. (Compare especially Hayek, *Prices and Production* [London: Routledge]). If this interpretation of the crisis and of the breakdown of a large part of the structure of production is correct, it

seems then comparatively easy to explain the further events in more familiar terms. Such an initial breakdown must have very serious repercussions. In our highly complicated credit economy where every part of the system is connected with every other, directly or indirectly, by contractual bonds, every disturbance at one point spreads at once to others. If some banks—those nerve centers where innumerable strands of credit relations come together—are involved and become bankrupt, a wave of pessimism is bound to come: as a secondary phenomenon a credit deflation is likely to be the consequence of the general distrust and nervousness. All these things, upon which the traditional monetary doctrine builds its entire explanation, will make things even worse than they are, and it may very well be that this secondary wave of depression, which is induced by the more fundamental maladjustment, will grow to an overwhelming importance. This depends, however, largely upon the concrete circumstances of the case in hand, upon the peculiar features of the credit organization, on psychological factors, and need not bear a definite proportion to the magnitude of the "real" dislocation of the structure of production.

This is the place to say a few words about an indirect connection between the alleged insufficient

supply of gold and the present depression. It is undoubtedly true that since before the war the quantity of gold has not increased so much as the volume of payments. To maintain a price level, roughly 50 per cent higher than before the war, was possible only by building a comparatively much larger credit structure on the existing stock of gold. After the process of inflation has once been completed, this should not cause troubles—in normal times. In times of acute financial crisis, when confidence vanishes, and when runs and panics make their appearance, such a system becomes, however, extremely dangerous. If the means of payment consist principally of gold and gold-covered notes and certificates, there is no danger that suddenly a large part of the circulating medium may be annihilated. A world-system of payments, however, which relies to a large proportion on credit money, is subject to rapid deflation, if this airy credit structure is once shaken and crushed down.

For example, the adoption of a gold-exchange standard by many countries amounts to erecting a daring credit superstructure on the existing gold stock of the world; this structure may easily break down, if these countries abandon the gold-exchange standard and re-adopt an old-fashioned gold standard.

It would be, however, entirely wrong to conclude from this that we have to blame the niggardliness of nature, that the situation would necessarily be quite different, if, by chance, gold production had been much larger during the last twenty years. Other factors are responsible, principally the inflation during and after the war. By means of such a monetary policy it is always possible to drive any stock of gold, however large it may be, out of the country. The natural thing is then to substitute later a gold-exchange standard for the abandoned gold standard, which means, as I have said already, the erection of a credit structure on the existing stock of gold.

Therefore, if the annual output of gold had been larger than it actually was, the difference would have been only this: the credit structure too would have become larger, and we would have started in for the last boom from a higher price level. If this is a correct guess of what would have happened—and it seems to me very probable—the economic consequences of the last period of credit expansion, 1927–29, and the present deflation would have been exactly the same.

It is of vital importance to distinguish between these additional, secondary, and accidental disturbances and the primary "real" maladjustment

of the process of production. If it were only a wave of pessimism and absolute deflation which caused the trouble, it should be possible to get rid of it very quickly. After all, a deflation, however strong it may be, and by whatever circumstances it may have been made possible and aggravated, can be stopped by drastic inflationary methods within a comparatively short period of time.

If we have, however, once realized that at the bottom of these surface phenomena lies a far-reaching dislocation of productive resources, we must lose confidence in all the economic and monetary quacks who are going around these days preaching inflationary measures which would bring almost instant relief.

If we accept the proposition that the productive apparatus is out of gear, that great shifts of labor and capital are necessary to restore equilibrium, then it is emphatically not true that the business cycle is a purely monetary phenomenon, as Mr. Hawtrey would have it; this is not true, although monetary forces have brought about the whole trouble. Such a dislocation of real physical capital, as distinguished from purely monetary changes, can in no case be cured in a very short time.

I do not deny that we can and must combat the secondary phenomenon—an exaggerated pessi-

mism and an unjustified deflation. I cannot go into this matter here, I only wish to say that we should not expect too much of a more or less symptomatic treatment, and, on the other hand, we must be careful not to produce again that artificial disproportion of the money streams, directed toward consumption and production goods, which led to overinvestment and produced the whole trouble. The worst thing we could do is a one-sided strengthening of the purchasing power of the consumer, because it was precisely this disproportional increase of demand for consumer's goods which precipitated the crisis.

It is a great advantage of this more refined monetary explanation of the business cycle, over the traditional one, to have cleared up these non-monetary, "real" changes due to monetary forces. In doing so, it has bridged the gap between the monetary and non-monetary explanation; it has taken out the elements of truth contained in each of them and combined them into one coherent system. It takes care of the well-established fact that every boom period is characterized by an extension of investments in fixed capital. It is primarily the construction of fixed capital and of the principal materials used for this—iron and steel—where the largest changes occur, the greatest ex-

pansion during the boom and the most violent contractions in the depression.

This fact, which has been stressed by all descriptive studies of the business cycle, has not been used by the traditional monetary explanations, which run in terms of changes in the price level and look at real dislocations of the structure of production, if they regard it at all, as an unimportant accidental matter. The explanation, which I have indicated, not only describes this fact as does the so-called non-monetary explanation of the cycle, but explains it. If the rate of interest is lowered, all kinds of investments come into the reach of practical consideration. May I be allowed to quote an example given by Mr. Keynes in a lecture before the Harris Foundation Institute last year. "No one believes that it will pay to electrify the railway system of Great Britain on the basis of borrowing at 5 per cent. . . . . At $3\frac{1}{2}$ per cent it is impossible to dispute that it will be worth while. So it must be with endless other technical projects."[1] It is clear that especially those branches of industry are favored by a reduction of the rate of interest which employ a large amount of fixed capital, as, for example, railroads, power plants, etc. In their cost-account, interest charges play an

[1] *Unemployment as a World Problem* (Chicago, 1931), p. 39.

important rôle. But there is an indisputable general tendency to replace labor by machinery, if capital becomes cheap. That is to say, more labor and working capital is used to produce machines, railroads, power plants—comparatively less for current production of consumption goods. In technical economic parlance: the roundaboutness of production is increased. The crucial point and also the point of deviation from Mr. Keynes's analysis is to understand well that a reaction must inevitably set in, if this productive expansion is not financed by real, voluntary saving of individuals or corporations but by *ad hoc* created credit. And it is practically very important—the last boom should have brought this home to us—that a stable commodity price level is not a sufficient safeguard against such an artificial stimulation of an expansion of production. In other words, that a relative credit inflation, in the above-defined meaning of the term, will induce the same countermovements as an absolute inflation.

I hope that I have been able to give you a tolerably clear idea of this improved monetary explanation of the business cycle. Once more I must ask you not to take as a complete exposition what can be only a brief indication. A sufficiently detailed discussion of the case could be only undertaken in

a big volume. Therefore, I beg you to suspend your final judgment until the case has been more fully presented to you. Only one objection I should like to anticipate. It is true this theory suffers from a serious disadvantage: it is so much more complicated than the traditional monetary explanation. But I venture to say that this is not the fault of this theory, but due to the malice of the object. Unfortunately, facts are not always so simple as many people would like to have them.

FEDERAL RESERVE POLICY IN DEPRESSION

By H. Parker Willis

FEDERAL RESERVE POLICY IN DEPRESSION

The question of Federal Reserve policy during depression has both a theoretic and a practical aspect. It is theoretic in that it raises important questions of central bank technique and management which are common to all central banking institutions. It is practical in that it offers a question of urgent and outstanding character for immediate disposition by American public men today. Both as an issue in economic theory, as a problem of central banking, and as a question of current policy in bank management at a critical moment, it is entitled to instant and compelling attention.

For a long time, we have shirked this whole issue of central bank policy. It has raised its head from time to time, but, with characteristic national optimism and insouciance, we have insisted in good times upon leaving it to those who, we thought, were in position to know and to whom some part, if not a large share, of the blessings of the new economic era must be ascribed. Today, we find that this shirking of the real question has led us

into an impasse. Accordingly, there are many who regret the former inactivity and disposition to accept all things that were as the best possible; but they now wish to settle the issue in a way that they believe will grant to them and to their own personal or business interests immediate relief from pressure or disaster. The time has come when we cannot defer longer some settlement of this issue and when, even as we speak here, the questions involved are shaping themselves toward some fateful conclusion which, if wrongly drawn, must be paid for, as such mistakes always are, over and over again, in loss and suffering on the part of the weaker members of the community.

In what I have to say today I shall speak with freedom, believing that this problem is too urgent to permit of glozing over, or evasion; too immediate and important to allow even a small opening for the introduction of mere eulogy, or apology for past errors; and too serious to warrant any risk of being misunderstood. Our Federal Reserve authorities have never hesitated to claim credit for such results as they thought were to their advantage or praise; they must likewise take the responsibility for other results less to their liking, if such responsibility seems to lie at their doors. Let us then speak frankly and truthfully, for the purpose

of setting forth what seems to be the warranted view of the whole situation.

It is hardly possible to sketch the policy to be followed by any central bank in depression, without first reviewing the policy to have been antecedently pursued in times of success or advance on the part of the community. A bank or banking system, like an individual, is the sum of all its acts. Depression, when it comes, looks back to an anterior period of inflation; and central bank policy on such occasions is the outgrowth of central bank policy during the preceding period. Let us then give attention, first of all, to the general question what a central bank is, and what it should, or can, do on any occasion. Our time, however, is too short thus to present in detail the whole history of Federal Reserve policy since the World War, and I must assume a general acquaintance with it in main outline.

Fundamentally, a central bank is an institution vested or endowed with public duties and intrusted with the performance of given services. What are these services? Certainly not those of acting as a bankers' bank, as is often said. Certainly not that of affording relief in "tight pinches" to hard-pressed banks, as is still oftener alleged. A central bank is a public or people's bank, and its service is

to perform the essential duties of "pure banking" in such a way as to advance the national welfare or need without fear or favor—always without a primary regard to profit. Of course, this view of central banking leads to the further inquiry what these national needs may be. They are simply enumerated as: (1) that of holding safely and with utmost economy the ultimate reserves of the country; (2) ascertaining the national need for specie reserve and making sure that it is adequately provided; (3) receiving, canceling, and thus "clearing," claims, checks, drafts, and the like, thereby economizing the specie supply to the utmost, and insuring the smallest possible draft on such supply in times of pressure; (4) transferring or shifting, through the function of rediscount, surplus supplies of available liquidating power so that they are jointly placed at the service of the banks of the community wherever most needed.

So much might possibly be accepted, in a general way, even though with some modifications or reservations. But there are some who would add to the functions so enumerated that of so-called "credit control," meaning thereby the exerting of some influence upon prices of commodities. To this I fundamentally object save under very restricted and limited conditions, which I will shortly

explain, and I therefore defer discussion of this alleged function until there is an opportunity in the argument to review some of the considerations on either side of a much-debated matter. If, then, we confine ourselves to a consideration of the basic central bank question as it stands, without involving this credit control proposal, we shall merely limit ourselves to the admitted and well-known field of central bank action; and we shall have a much more positive basis for our conclusions.

Devoting our attention, then, to the action of central banks in past periods of crisis, panic, or financial breakdown, and to the depression periods consequent upon them, we find that, on the whole, the attitude of central banks has been that of conservation and protection. They have sought to prevent, and have generally succeeded in preventing, hoarding of coin and currency by individuals by promoting confidence and assurance. When they lost control of the situation, they have attempted to prevent bank failures by obtaining and putting into effect measures for preventing such failures. Of course, they have usually sought to anticipate such failures, and have done their utmost to establish conditions calculated to guard against them. In the main, they have tended to supply credit to those who needed it, but at fairly

high rates designed to suggest the fact that supplies of credit were not abundant. Generally speaking the drift of specie into central banks in periods of crisis has thus been substantial, so that they have usually ended the period of depression with larger reserves than they had at the beginning, and without any serious losses meanwhile. Above all, they have been able to shift a supply of credit from places or institutions where it was available or abundant to those where it was short or insufficient.

The classical function of central banks has thus been that of conservation and support, rather than that of active initiation of new business or the attempt to stimulate or encourage the undertaking of new enterprises or hazardous proposals of any kind. Emergency action, if such it may be called, has not usually been considered within the province of central banks. Perhaps the nearest approach to it has been furnished in the giving of support to banks that were facing emergency with a view to helping them over difficult places, or at times enabling them to continue the making of loans to customers who otherwise would have had to do without them. On the whole, the policies of central banks in times of crisis have involved the application of rates higher than those ordinarily in

use, followed by reductions for the encouragement of business but not of speculation. Recognizing that credit is scanty, such banks have sought to conserve it, and their efforts have been more or less aided by making the credit costly, especially to those who were not likely to use it for an economic purpose.

Every effort, too, has been made to bring about the cancellation of the inflated credit, growing out of previous periods of inflation, at as early a date as possible, in order that the dangers resulting from it might be minimized and kept within as narrow time-limits as might be. Certainly central banks have not been in the habit of making credit as cheap and easy as possible in such periods or distributing it generally. They have, of course, sought to make it appear that there was an abundance of credit for all legitimate uses, but they have not been disposed to be prodigal with their resources or give the impression that a time had come when anyone might be allowed to dip into bank funds according to his own good pleasure when, as, and if he saw fit to do so, much less have they been disposed to embark upon inflationary policies. Have the general principles thus established been changed? Is there any reason to think of a "new era" in central banking? This is a question which

needs to be studied both with reference to actual facts and also from a theoretic point of view.

The policy thus outlined was followed prior to the advent of the depression by the central banks of Europe, so far as they were able. Unfortunately, the post-war years have brought a change in central banking abroad, just as they did in the United States, which set at naught a great many canons of banking soundness that had previously been regarded as almost sacred. Many central banks have become "frozen" through the adoption of measures for the giving of "relief," or for the maintenance of the prices of commodities, or for the purpose of granting international assistance, or for some similar reason. The outcome with reference to the Bank of England has been fully stated by the MacMillan Committee which, in its report of June, 1931, definitely pointed out the changes that had come over the portfolio of the bank. It notes the trend toward "open-market" operations—a type of central banking which a French statesman has recently described as "an Anglo-Saxon vice"—and it goes on to urge the restoration of greater liquidity in the bank's portfolio. The situation which led up to the abandonment of the gold standard by Great Britain last summer is not widely recognized, and is generally conceded to have been brought about

in no small part by unsound methods. An American banking economist has expressed the opinion that there was no absolute need for the Bank of England to resort to this extreme step. Be this as it may, the fact that there has been a wide departure from pre-war central banking principle, even in Great Britain—the supposed home of sound finance and careful banking, the birthplace of modern central banking—deserves to be carefully noted before we begin any detailed consideration of home policies—and particularly of those home policies which are considered peculiarly appropriate in periods of depression.

The actual policy adopted by the Federal Reserve banks in time of depression needs now to be stated. Fortunately, there need be no question or doubt as to what it is. About a year ago, the Senate Banking and Currency Subcommittee sent to all reserve institutions lists of questions for reply, and the answers so received have been carefully compiled and published in Section VI of the *Hearings* of 1931. Among these questions was one which called for a statement of the policy of reserve banks upon occasions when rates had been changed during recent years. It is, therefore, possible to select a representative period of undoubted depression followed by recovery and to note what

was actually done upon such an occasion. The period I have selected for such comment is 1924.

The answers to questionnaires already referred to describe—as already explained—the rate changes and business conditions in the year 1924 as follows:

1924—May 1, 4 per cent
June 12, 3½ per cent
August 8, 3 per cent

The three rate reductions in 1924 were made during a period of depression in business, considerable unemployment, gold imports, and declining credit volume. These rate changes accompanied reductions in open-market money rates.

Stating the policy of the system in these circumstances, one of the Reserve banks filed a memorandum prepared by its late governor in which the latter says:

> By the fall of 1923 the bulk of the short-time Government security holdings of the Federal Reserve banks had been liquidated. The sales made throughout the previous year had forced member banks to borrow considerable sums from the Federal Reserve banks in order to replace the reserves which they lost when payment for the securities was made to the Federal Reserve banks. The fall of 1923 saw the members borrowing about $835,000,000 on direct discounts from the reserve banks, of which over $200,000,000 was in New York. At that time, considerable importations of gold were being received from Europe. There was developing some recession

in business; the New England textile manufacturers had suffered a severe slump; the same being to some extent true of rubber, some branches of the steel, and of other trades. But the most serious difficulty which had developed in any part of the country was the banking situation in the West, especially in the Northwest and Southwest. Banks were failing almost every day.

Notwithstanding imports of gold, there was continued pressure by member banks to liquidate their indebtedness to the reserve banks, causing, in turn, pressure by member banks upon their borrowers to repay loans. The commercial-paper rate was 5 per cent; rates for 90-day bankers' acceptances, 4⅛ per cent; customers' loan rates at New York about 5¼ per cent; time loans upon securities, 5¼ per cent; stock-exchange call money, 4¾ per cent; the discount rate of the Federal Reserve Bank of New York was 4½ per cent, where it had been maintained since February 23, 1923.

The condition of the farming community, including the cattle industry, was coming perilously near a national disaster, and feeling became so strong throughout the West that all sorts of radical proposals for legislation and other Government relief were being urged.

Sterling had declined in November to $4.26 under the influence of a general flight of capital from Europe to this country. Interest rates in London were lower than in New York. "Money" (3-months bank bills) was quoted from 3 to 3⅜ per cent; tap rate on Treasury bills was 2¾ to 3 per cent, and the official rate of the bank was 4 per cent.

It was under these conditions that the Federal reserve banks undertook the gradual repurchase of short-time Gov-

ernment obligations. The following definite objects were in mind, at least so far as the writer was concerned:

1. To accelerate the process of debt repayment to the Federal reserve banks by the member banks, so as to relieve this weakening pressure for loan liquidation.

2. To give the Federal reserve banks an asset which would be automatically liquidated as the result of gold imports so that later, if inflation developed from excessive gold imports, it might at least be checked in part by selling these securities, thus forcing member banks again into debt to the reserve banks and making the reserve bank discount rate effective.

3. To facilitate a change in the interest relation between the New York and London markets, without inviting inflation, by establishing a somewhat lower level of interest rates in the country at a time when prices were falling generally and when the danger of a disorganizing price advance in commodities was at a minimum and remote.

4. By directing foreign borrowings to this market to create the credits which would be necessary to facilitate the export of commodities, especially farm produce.

5. To render what assistance was possible by our market policy toward the recovery of sterling and the resumption of gold payment by Great Britain.

6. To check the pressure on the banking situation in the West and Northwest and the resulting failures and disasters.

The writer has roughly estimated that it might be possible for Europe to ship us still some $400,000,000, which I thought would likely be distributed over a period of, say, two years, but that, notwithstanding these gold shipments, pressure for liquidation of bank loans would not be reduced promptly

enough, except it was accelerated through purchases of securities by the reserve banks.

In pursuance of this policy, the Federal reserve banks gradually purchased over the following eight or nine months a total of \$500,000,000 of short-time Government securities, and throughout that period gradually reduced discount rates until the rate of the New York bank was 3 per cent, whereas the Bank of England on July 5, 1923, had raised its rate of discount to 4 per cent and exercised its influence to maintain open-market rates in London at a somewhat higher level than during the previous year.

In reviewing what has happened during the past year, the outstanding event, of course, has been a crop of unusual size and, as to all but corn, of good quality, produced at a time when there was a crop shortage in the rest of the world; that, itself, gave the country a fortunate recovery from some part of the depression which was growing. If, as indeed was the case, however, the Federal reserve policy hastened the establishment of cheaper money, then the developments directly attributable to cheap money must be considered as in part the outgrowth of that policy. These may be enumerated as follows:

1. The pressure for liquidation of bank loans was gradually relaxed, and in the summer of 1924 bank borrowing from the Federal Reserve Bank of New York and the other large reserve banks had practically all been liquidated; and somewhat similar conditions developed throughout the Middle West, the evidences of credit pressure and of disorganizing liquidation gradually disappearing. The banks of the State of Iowa, as an example, had reduced their debt to the Federal Reserve Bank of Chicago from \$98,000,000 to about \$12,000,000, due largely

to the willingness of the member banks to lend money more freely in that State where credit disasters had developed, and as a result of which banking conditions were stabilized. And the same seems to have been true in Minneapolis, Kansas City, and Dallas districts.

2. The outcome of the crops made it necessary for Europe to make unprecedented purchases of our small grains at very high prices compared to recent years. But the coincidence of low rates for money in this market and higher rates in London enabled foreign governments and foreign corporation borrowers to place a total of a billion and a quarter of loans in the market, which provided the credit to be used in paying for the crops. Had these foreign loans not been placed in this market it is quite certain that foreign purchasers of our farm produce would have found difficulty in financing these purchases, which could only have been made by short-time bank credits; the extensive use of our banking system for financing of that sort would not only have been at high rates, but might have been an influence for the creation and maintenance generally of much higher rates than have prevailed during the crop-moving season. Our crop sales to Europe might have been much restricted.

3. For a period of at least 12 years, as I recall—that is, since about 2 or 3 years before the outbreak of the war—there had been no such market for investment securities as would enable our railroads, public utility, and industrial corporations to make capital issues on reasonable terms, so as to refund short-time loans and provide the money for needed extensions and betterments. The past six months or so has enabled them to do so. There has rarely been a period of easy money in this country where sound financing has been so evi-

dent as in this period, and where the absence of promotion and other security issues of doubtful character has been so marked.

4. One of the greatest menaces to our ultimate security against inflation has been the uncontrollable stream of gold coming to this country to make needed payments for which credit was not available. Had our credit not been available to pay for this year's crop exports, the amount of gold coming would undoubtedly have been much larger, or, at least the gold movement would have continued longer. . . . .

5. The recovery of sterling has now reached a point where it is reasonably possible for the British Government and the Bank of England to consider the resumption of gold payment. Whether they do so or not depends upon their own sense of security for the long future. But this country is still in position to give them needed assurances of credit for a long period if they require it. . . . .

6. It is difficult to state to what extent gradual recovery of confidence and of business in this country can be attributed to ease of credit conditions. It can, however, be definitely stated that if some $500,000,000 of credit had not been furnished the market by the purchases of the Federal reserve banks, the liquidation which was proceeding for the purpose of repaying loans from the reserve banks would have continued for a much longer period, and, instead of having some expansion of bank credit such as has taken place, we would have had some further contraction and probably definite further slackening of business and lowering of prices. . . . .

7. Finally it must not be overlooked that one of the developments of the past year which may in part be attributed to the policy of the Federal reserve system but also quite largely

to favorable crop developments, and to political developments, has been a greater feeling of tranquillity and contentment throughout the country than we have experienced at any time since the war. Employment conditions are improving, industry and transportation in a general way are sound and successful, and the relief of the strain on the banking situation throughout the West has done much to arrest the growth of unsound and radical and extreme ideas. . . . .

This memorandum has been quoted thus at length because of the remarkable insight it gives into the motives and policies of the Federal Reserve banks in a period of depression. A similar point of view has been steadily maintained by several of the banks, and it has been admitted by all concerned that the memorandum which I have presented at such length furnishes probably the best exposition of the point of view by which the policy of the system has been, and is, controlled.

The policy of low rates and expansion with large purchase of securities and the letting out of great volumes of credit, thus described as being characteristic features of Federal Reserve policy in times of depression or difficulty, has since then, so to speak, set the pace for subsequent discussion and for the adoption of subsequent measures. As was testified during the hearings before the Senate Committee last winter, these policies drove a great

quantity of gold out of the country during the subsequent period, although most of it later returned when the policy had lost its force. In subsequent years, notwithstanding the severe warnings that have been furnished by later events, the system has returned to the same method. Thus, immediately after the panic of 1929, prior to which there had been a brief period of very high rates at Reserve banks, the discount rate, as well as the bill-buying rate, was sharply cut, the former going to a level of $1\frac{1}{2}$ per cent while corresponding reductions were made in the latter.[1] This policy was, however, ineffectual, so far as the stimulation either of the stock market or commodity prices or commodity trading was concerned. During the whole of the year 1930 and the forepart of the year 1931, there was a descending trend in the price level and a general disposition on the part of most persons in the stock market to abstain from active dealings in shares. There was no demand for "money," because no one wanted money on loan. There was a general desire to get "funds" through the processes of liquidation, but there was no disposition to borrow for the purpose of carrying stocks or securities at the inflated prices that then still existed.

[1] This policy is well understood to have followed discussions and decisions among officers of Reserve banks held in Washington.

The low rates, however, and the constant announcements of cheap and easy conditions of borrowing incidentally had a considerable effect upon the minds of European financiers and public men. The collapse of Germany made it evident that there was a large element of non-liquid paper in American banking establishments which had previously been supposed to be liquid, and that the great advances which had been made to foreign central banks might be difficult to recover at any very early period. In these circumstances, it was evident that the Reserve System might readily be subjected to severe strain; and, unless it were willing to resist such strain by repelling rather than inviting long-term or frozen transactions, it might easily place itself in a position of danger. Foreign countries, in other words, regarded themselves as parties to the financial situation just as much as Americans, and they were disposed to insist that their large balances in this country deserved as much protection as did those of other holders. The abandonment of the gold standard by Great Britain emphasized these feelings and inclinations, with the result that movements of gold out of the country, which had previously been under way, became aggravated, and in consequence a severe outward flow ensued. This, during the autumn of

1931, took from the country some seven hundred million dollars of gold, and culminated in a decision to send to the United States two representatives of the Bank of France whose duty it should be to examine the situation closely. It was subsequent to, and undoubtedly as the result of, the visit of these financiers that the discount rate was raised by the System to 3½ per cent, with corresponding increase in bill-buying rates, and with incidental changes of an important nature in the general policy of the Federal Reserve System as a whole toward the entire market. In these circumstances the outward movement of gold ceased, although the higher rates of the Reserve banks had no effect in changing or reducing the amount of demand for any type of loanable funds.

It is a strange thing in view of the conditions that, within recent weeks, there should have been a renewal of the "cheap money" policy, and yet such is the case. Statements in various public prints, issued on January 13 and resulting from interviews with Federal Reserve authorities after a meeting of the open-market committee of the System at Washington, announced the intent to cut buying rates on bills, probably to reduce discount rates, and also to embark upon large purchases of government obligations. One influential and au-

thoritative print at the time stated the view that conditions were now so urgent as to warrant a resort to measures which in ordinary times would be thought extreme or dangerous but which were now called for in order to spur the securities market and the price level to greater activity. It is merely a repetition of former events that the movement of gold out of the country has been renewed, and that the Bank of France should have given orders to dispose of its balances here with the intention of withdrawing specie. Accordingly, there has been, and is still continuing, an outward movement of the kind.

Has the policy adopted by the Reserve System had any decisive effect at home that would offset this tendency to lack of confidence abroad? It would be difficult to indicate that it has. Apparently the system has been really disconnected from all markets. Neither its low rates nor its higher ones has had any influence in preventing, or in furthering, the decline of security prices. Neither its open-market buying nor its inactivity has had any perceptible or traceable connection with the current of domestic events. The business situation has remained unchanged throughout the entire course of the depression, practically working itself out, on its own resources. Bank failures have

been upon an enormous and wholly unprecedented scale, commercial failures have moved in the same way, although not so markedly as bank failures, while the general business public has found it at times almost impossible to get loans on any terms, since it neither had access to the Federal Reserve System direct nor could it induce the commercial banks to act as intermediaries between them and the Reserve System. In fact, the experience of this depression has demonstrated, more clearly than ever before, the fact that there is a fundamental flaw in the structure of Reserve banking. That flaw is found in the imperfect means of access granted to the public with respect to Reserve banks by reason of the fact that the Reserve banks are bankers' banks which deal only with member institutions or, more truly stated, are stock-market banks, which have so restricted their own field of operations that they cannot reach the rank and file of business institutions even if they would, but must work through the market.

This fact must always be borne in mind when interpreting or criticizing the policy of Reserve banks during any period, but particularly during periods of depression. It is the price paid—or a part of the price paid—for the original adoption of the Federal Reserve Act, which could not perhaps

have been passed at all had it adhered to the well-tried principles of European central banks by giving access to the public in direct dealings between borrowers and the reserve institutions. Changes in the policy of the Bank of France are immediately felt by the business world in the form of changes in the bank rate at its hundreds of branches. Changes of policy at the Bank of England are immediately made known to the community through its extensive dealings in bills and other marketable paper, foreign and domestic, which are carried on through the elaborate machinery of the world's chief money market. In the United States the Federal Reserve banks have found themselves confined to the comparatively limited group of institutions which deal in government bonds and obligations generally and in bankers' acceptances, and it has refrained from even exercising the open market powers which were given to it for direct dealings in commercial paper. One of the Reserve banks even restricts its dealings, as a rule, to persons or institutions which are in possession of a capital of one million dollars or over.

In these circumstances it is, of course, exceedingly difficult for changes of reserve policy to react directly and immediately upon domestic business or trade. They are far more likely to operate,

first, upon the sensitive mechanism of foreign financial markets and to influence the movement of funds between the United States and foreign countries. So far as they are effective at home it is usually through inflation of security values. Accordingly, there is no possibility of applying the influence of changes in credit costs or of credit volume at those points where they would be likely to be effective. This situation is coming to be better and better understood and, of course, it destroys the possibility of what is called credit control through the Federal Reserve System, even if we should admit the possibility of such credit control in other circumstances. Summing up the actual results, then, of Federal Reserve policy in depression, we must conclude that they have been very largely theoretical, save in so far as they were operative abroad, and that, in the latter particular, they have usually been injurious because of their influence upon the redistribution of gold reserve. The United States has, and has long had, an excessive amount of gold in its possession. The withdrawal of a portion of it is not to be regretted but rather the reverse. Nevertheless, it remains true that there is great inconvenience, as well as some anxiety, to be recognized in the provoking of abnormal movements of gold or the aggravation of

them when once they have begun even from extraneous causes. In part, therefore, we must conclude that Federal Reserve policy in time of depression will always be more or less ineffectual so long as the law and administration of the system stand as they do now. We must also conclude that the best Federal Reserve policy will be that of "hands-off," with rates maintained at a normal level, and no effort to attempt to interfere artificially with the course of events. It will always be true, whether in depression or in periods of activity and prosperity, that operations upon stocks and securities, designed to place funds in the stock market or to withdraw them from the securities market, are likely to cause trouble, aggravate dangers already existing, and hence to be a harm rather than a relief.

This review of the actual practice of our central banking system upon a recent occasion, subsequent to which the policy had been frankly stated, and upon another when the same policy has evidently been duplicated, will suffice, perhaps, to illustrate the actual operation of the system under present conditions so that no more need be said of it for the moment. What is eventually more interesting to the student of banking in general is, of course, the question what the underlying basis of policy for adoption

by any central bank and, hence, by the Federal Reserve System, as a central banking system ought to be. This is the question to which I referred at an earlier point when I raised the problem of "credit control" or what is sometimes called, when applied during depression, "inflation." We ought not to limit our discussion of this question to an immediate narrow field. Perhaps a change in our constituent banking act may be introduced; perhaps a different kind of administration may be resorted to. Be this as it may, the really important problem in the whole situation is afforded by the general question how far the federal reserve system, or any system of the sort, can remedy or relieve depression, or, conversely, hold in check tendencies to higher prices or larger dealing in securities or commodities than would otherwise be undertaken.

This is the whole problem of so-called "credit control" as envisaged by a large group of persons who have recently been expressing their views about the probable or desirable policy of our reserve system in the present emergency. Their thought in the matter was represented at a very early stage of the depression by the argument of the economist of one of the large Canadian banks, who expressed the opinion that the purchase of $1,000,000,000 or $2,000,000,000 by Federal Re-

serve banks, to be paid for in notes, would immediately end the depression. This thought has been enlarged upon by many others who see in the present situation an opportunity for the issue of bonds represented by almost any figure that fancy may dictate followed by a row of nine ciphers. It is usually stated that the proceeds of these purchases of bonds should be used by the government or by others in public works, in speeding up consumers' purchases, in loans to banks that are hard-pressed, and in a variety of other similar ways. There may be objects that call for large government appropriations; or there may be reasons for the continuation of investment policies that have been embarked upon before the advent of depression or that cannot well be abandoned in spite of the outbreak of such reaction and loss of ground by commerce. This type of expenditure, however, is not the issue. The question at stake is whether the banking system can to an advantage, by and of its own motion, undertake a general expansion of the credit of the community by purchasing securities or acceptances or by lending freely upon paper that it otherwise would not consider. Let us keep very distinct in our own minds the line of demarcation between what is called "relief" of given institutions which seem doomed to failure or embar-

rassment and the support of others which need new capital, and, on the other hand, the pushing out of credit merely to affect prices, speed up business, and bring what is called "prosperity." If there be no ground for the view that such pushing forth of credit can accomplish the latter result, there will, in many quarters, be a very different attitude toward interference on the part of central banks with the natural current of events in business.

What happens when credit is "released" by a reserve bank? We may first fairly state a view of the matter which has become quite general. The argument is presented that such a policy will be likely to bring about the following consequences:

1. Create a demand for, and thus raise the price of, securities by making it profitable for persons to "carry" them cheaply.

2. Create a demand for, and thus raise the prices of, commodities.

3. Encourage and stimulate business, and confidence as a result.

4. Thus help trade and promote public hopefulness and optimism.

In considering these claims, it is worth while, first of all, to note that they have only the most slender of statistical or other support, and that the data put forward in their behalf are of a wholly un-

convincing character. A careful consideration of statistical facts, and a comparison of the "lag" between the release of credit and changes of prices, gives rise to the gravest of doubt on the whole subject. This doubt and the statistical problem connected with it, however, may be waived, and attention concentrated entirely upon the logical basis of the argument.

What really happens when credit is "released" by a reserve bank whether by "open-market" operations or by rediscounting? The funds are handed to others—usually and preponderatingly to those who have furnished (to the reserve bank) long-term paper and are now provided with short-term funds in exchange. The funds they thus get are available for any use they choose. If they use them for increased purchases or materials, for the employment of labor, or for the prosecution of new enterprises in any form, we may assume that the result will tend to be that of changing the balance of supply and demand for the moment, and of raising prices or tending to raise them, correspondingly —at least to help in preventing them from going lower. Whether it is a wise step or not will depend ultimately upon whether the use so made of the funds is an economic use or the reverse. For example, any such step at the present time would

simply mean an aggravation of existing difficulties, due to the fact that we are already overburdened with construction work and fixed capital that are not likely soon to be employed. On the other hand, if these funds merely go into the hands of bankers who borrow to build up reserves in order to meet the demands of depositors, they serve to satisfy the requirements of such creditors, but it is doubtful whether they have any more permanent effect. If they go into the hands of bond dealers or large investors who surrender government bonds or banker's acceptances that they have been holding, the funds merely tend to affect values that are influenced by the operations of such dealers or investors. The assumptions always implied in the writings of various current publicists that such funds are immediately transferred elsewhere or are generally spread, through the working of competition, is based upon the notion that there is no resistance to the movement of credit, and that the readjustment of values occurs automatically. This latter view has not the slightest support either in fact or in theory.

On the other hand, the following dangers are certainly produced by such artificial releases of credit:

1. Placement of funds in the hands of persons

who, in many cases, have not asked for and do not need them.

2. Creation of new liabilities on the part of central banks which they must keep convertible into gold.

3. Consequent danger of inability to maintain gold redemption.

4. Prospect that this new credit will do harm rather than good by being used where it is not needed.

The truth of the matter is that inflation is never a remedy for anything, and that it is more harmful when allowed to hurt and weaken bank portfolios than at any other time or than when released in any other way. At this particular moment, two serious dangers are to be expected from it: the first, the aid it will render in embarrassing bankers through demands for redemption; the other, the assistance it may give in enabling the undue speculative holding of securities, thereby retarding progress toward the re-establishment of a solid and equalized system of prices and values.

A central bank is a dangerous agency through which to undertake inflation, the more so when we remember that its operations may easily get out of hand and prove disastrous. If the efforts of reserve banks in recent years, upon occasions of ex-

pansion and overtrading, have, as most admit, proved hazardous and unsuccessful by aggravating rather than reducing such dangers, their efforts, both in recent times as well as currently, must be regarded as having very similar potentialities. As time goes on and as the credit so "released" by their policies falls into hands which are not disposed to use it directly in the management of business, the consequences become plainer and plainer —but too late to correct them. On the other hand, the influence of the depression policies upon relations with foreign countries can scarcely be viewed otherwise than as a source of extraordinary danger.

It is difficult to exaggerate the importance of this subject, whether we view it as a problem of current financial policy or as a long-range question of economic and financial theory. From either point of view, it is a basic issue about which some positive and final conclusion must be reached before we can expect to manage our banking system soundly, or even to prevent it from being a "bull in the china shop" of international finance. Perhaps the problem would not be so serious and outstanding were it not for the fact that only two major countries have been able to maintain the gold standard in theoretically full working order. The rest of the

world naturally looks to them, not only for guidance, but also as a source of current monetary and banking supplies of the metal. What they do necessarily leads to important, indeed world-wide, results. The question is thus not one to be concealed or discussed only behind closed doors. In the last analysis, the policy chosen must be determined by the public—certainly ratified or rejected by it. The instruction of the public sanely and wisely with regard to the principles involved is thus both a duty and an obligation.

THE FUTURE OF THE GOLD STANDARD

By Lionel D. Edie

THE FUTURE OF THE GOLD STANDARD

I

The example set by England in allowing the monetary unit to depreciate from gold parity will probably be copied by additional countries in Europe before the wave of currency depreciation has fully exhausted itself. On the other hand, under the conditions of stress and strain which may reasonably be assumed at least during the first half of 1932, it is quite unnecessary for the United States to allow the dollar to depreciate from parity. The injury to world-trade resulting from fluctuating exchange rates, particularly of sterling, will constitute a powerful inducement to England to lead the world back to gold parities of exchange at the earliest favorable opportunity. These parities will, in some cases, be devalued monetary units but they will be expressed in terms of a given weight and fineness of gold. These brief statements summarize the conclusions of the present paper, especially with reference to relatively near-term developments.

II

During the latter part of 1931 the world depression entered a stage which threatened the monetary standard in most countries of the world. This stage was dramatized by England's abandonment of gold parity. After the English action, public opinion in the United States became aware of certain heavy strains which were being placed upon the gold standard in this country. These strains assumed three main forms:

a) Foreign withdrawals of specie,

b) Domestic hoarding of currency,

c) Economic disadvantages, in the nature both of competition with countries on a depreciated standard and of an abnormally heavy burden of fixed long-term debt payable in dollars of sharply appreciated purchasing power.

a) The policy of France in making heavy withdrawals of gold from foreign centers affected the United States only as a bystander until the autumn of 1931, when heavy withdrawals were made from New York. These withdrawals were temporarily suspended in the fourth quarter of 1931, but the knowledge that they could be resumed at any time constituted a potential threat to the American money market. This potential threat served to arouse a lively discussion in the United States of

the possibility of our eventual forced abandonment of gold parity. If a careful appraisal of this potential threat is made, one is warranted in the view that the United States need not, and should not, depreciate the dollar because of the pressure which any single European country can exert against the dollar. It is a well-known fact of banking experience that the most effective way of stopping a run on a bank is to demonstrate to the public that the bank has an abundance of cash with which to pay out. This lesson of individual banking experience has a parallel in international banking problems. The United States has sufficient gold to enable this country to say to France, in effect, "We are setting aside the full amount of gold to which you have claim, and it would be our wish that you take this gold home promptly." By taking this attitude, the United States would not only increase international confidence in the dollar but would also reassure the American public that the dollar is not threatened from an international source. This country would still have intact nearly 4 billion dollars of gold. Such an amount would be more than 50 per cent in excess of our gold stock at the time of the 1921 recovery and would be ample to support the proper functioning of the Federal Reserve System.

b) The hoarding of currency has given rise to alarm because of a technical flaw in our banking system rather than because of fundamental conditions. This technical flaw is found in the provisions of Federal Reserve note issue. The fact that Federal Reserve notes require 40 per cent gold and 60 per cent collateral means that, when the collateral is limited in amount, additional note issue has to be backed practically 100 per cent by gold. The available collateral is limited because government bonds are not eligible as collateral for note issue. This provision is doubtless wise under normal conditions but it is unwise under abnormal and emergency conditions. Under the latter conditions, a heavy currency drain tends to lower "free gold." All that is necessary to correct this fault is a minor amendment to the Federal Reserve Act along the lines of English legislation. The English legislation permits a temporary expansion of fiduciary note issue to meet abnormal domestic requirements. Sooner or later, the Federal Reserve Act will have to be amended to permit the Federal Reserve to utilize United States government bonds as collateral for Federal Reserve notes during emergency periods.[1] This modification of a technical

[1] Such an amendment was subsequently provided in the Glass-Steagall Bill.

provision would automatically solve the free gold problem and would remove the danger to the gold standard which would now arise if any sharp increase in currency-hoarding were to take place. The amendment would constitute a much less severe tinkering with the Federal Reserve Act than would most of the amendments that have been proposed in official circles. With such an amendment on the statute books, hoarding would not menace the gold standard unless it took the form of hoarding gold coin. This danger seems remote, but, if it became real, the only step necessary to protect the gold standard would be to place this country on a gold bullion standard. Such a step would in no way impair the effectiveness of the gold standard and would preserve intact the gold dollar of present weight and fineness.

c) The economic fears for the gold standard are twofold: First, a certain school of thought advocates that this country should deliberately devalue the dollar in order to place the United States on a favorable competitive basis with countries which have depreciated their monetary units. The proposal mistakes a temporary competitive advantage for a permanent one. As soon as price levels in various foreign countries have been adjusted to their new levels of exchange rates, the competitive

disadvantage to the United States will automatically disappear. It would be folly to abandon gold parity deliberately, for the purpose of solving a temporary competitive disadvantage.

A second school of thought has advocated a devaluation of the dollar as a means of enabling debtors to meet a burden which is automatically increased by virtue of the decline in the price level. However, a devaluation of the dollar would not be of great assistance to the debtor in a country where so large a part of outstanding contracts require payment in a gold unit of specific weight and fineness. The gold clause in contracts would nullify any advantage to the debtor from changing the weight of the dollar. Consequently, the economic reasons assigned in some quarters for deliberate devaluation of the dollar are unconvincing.

In summary, therefore, neither the threat of foreign withdrawals, nor the threat of currency hoarding, nor economic considerations makes it necessary or desirable for the United States to allow the dollar to depart from gold parity during the first half of 1932.

III

The longer-term future of the gold standard is a world-problem and requires a broader viewpoint than any single country. Nevertheless, the United

States has developed a position of such great economic importance in world-affairs that the policies of this country deserve careful analysis in themselves.

Anyone who reads the history of money standards is likely to be impressed by the lack of understanding of great changes in the standard until they are viewed in retrospect. Fundamental developments often proceed for one or two decades before even bankers and economists sense what is taking place. It is my impression that a new major development has been taking place in the gold standard over the past two decades, particularly in the United States, and that this development is not yet recognized by the closest students of the Federal Reserve System.

In order to lead up to a statement of this major development, the economist has to start with a fairly specific definition of the gold standard. Usually the definition runs in terms of certain technical attributes of the standard, such as a gold unit of given weight and fineness, redemption of currency in metal, legal-tender provisions, free coinage, free movement of gold to and from the industrial arts, free export and import of gold within narrow range of mint parity of exchange, and reserve ratios between gold, currency, and deposits.

These technical attributes of the standard are essentials to a definition but, after all, they do not indicate the basic economic function of the standard.

An automobile may be defined in terms of wheels, gears, and bars, but this overlooks the fact that an automobile is a vehicle of transportation. A house may be defined in terms of materials, frame-work, and dimensions, but this overlooks the fact that a house is a device for shelter. Similarly, a gold standard is an aggregate of technical requirements, but this overlooks the fact that it plays a basic economic function. What is that function?

In the older literature of the subject, one finds much emphasis upon the rôle of gold as a regulator of monetary supply. The fact that the accumulated stock of gold is very large relative to the annual new production of gold insures that over short periods of time the gold stock cannot be subject to violent fluctuations. This relative stability in gold supply over short periods commends gold highly as a monetary base. In brief, the primary economic function of the gold standard is a supply function. *More specifically, this supply function is to protect economic society from excessive short-term fluctuations in money.*

With the growth of pyramided credit structures, this supply concept has to be enlarged to include credit. In the modern credit economy, the function of the gold standard is to prevent excessive and destructive variations not only in the reserve base but also in the credit superstructure.

That difficulty exists in realizing this objective is apparent to anyone who studies modern banking history. Something has gone wrong in the machinery for relating credit to gold, with the result that even though the gold base is free of excessive short-term fluctuations, nevertheless this satisfactory stability of the gold base does not hold the credit superstructure in line.

In the Federal Reserve System, a buffer is created between the credit superstructure and the gold base, a buffer which is found in member bank reserve balances. These balances are the effective reserve base of the credit structure, and excessive fluctuations can and do take place in their volume, quite unlike the movements of the gold reserves of the country.

This brings us to what I regard as the clue to the future of the gold standard in the United States, and, indirectly, to considerable degree, in the world. The Federal Reserve Act cut the tie which binds the gold reserve directly to the credit volume

and by so doing automatically cut off the basic function of the gold standard. People talk about abandoning the gold standard, without realizing that in an essential respect we abandoned it some time ago. We abandoned the automatic supply function of the standard. We did so unintentionally and unconsciously, but effectively, none the less. We are not now on the gold standard, in so far as its supply function is concerned, and we have not been for some time. True, we have the trappings, earmarks, and accessories of the gold standard, but we do not have the essential economic service of that standard because gold has been divorced from credit.

Member bank reserve balances are the intermediary between gold and credit. These balances are the active base of our whole banking system. To understand the movements of these balances, it is necessary to consider five major variables. There are certain lesser variables which may be overlooked for purposes of this brief analysis. The major variables are as follows: (*a*) currency flow, (*b*) gold imports and exports, (*c*) rediscounts, (*d*) bills held by the Federal Reserve, (*e*) government bonds held by the Federal Reserve.

Fluctuations in these items may occur at times and in amounts which exaggerate waves of infla-

tion or deflation and which make possible extremes of speculation or liquidation. There is no saving grace inherent in the situation which assures that these variables will cancel out or will give orderly movements in the net reserve base. On the contrary, they may lead to violent excesses of an irrational and destructive character. Inasmuch as we are here particularly concerned with a period of excessive deflation, we may consider that side of the picture only, but that is not to overlook the danger of converse excesses on the side of inflation.

IV

a) The currency flow in the deflation of 1929–32 has been dominated by hoarding (the term is used broadly to include currency required in regions where bank facilities have been impaired by failures). The hoarding process has accentuated the pressure of deflation for two reasons. First, it has involved heavy rediscounts in a period of weakened confidence. Member banks tend in such a period to look upon debt to the Federal as a badge of weakness, and occasionally their depositors feel uneasy about having funds in banks which are known to be rediscounting. Consequently, member banks endeavor to get out of debt to the Federal by liquidating some of their assets, a process which further

depresses values. Second, hoarding accentuates deflation because of the "free gold" technicality in our banking mechanism and makes the Federal Reserve reluctant to expand open market purchases of Governments. Governments are not eligible as collateral for note issue.[1] When "free gold" falls below $500,000,000, the further purchase of Governments is considered unsafe by the Federal Reserve. If the Federal buys Governments, and rediscounts are reduced an equal amount, eligible collateral for note issue declines *pari passu*, and free gold declines likewise. For the two reasons cited, therefore, currency-hoarding generates a vicious circle. Hoarding forces more liquidation, more liquidation causes more fear, and more fear causes more hoarding.

Member banks obtain currency by drawing on their balances at the Federal Reserve. When the currency demand is abnormal, they tend to pull reserve balances down to a minimum and to keep them there. They do not wish to rebuild them by rediscounting any more than is absolutely necessary, and the Federal is reluctant to rebuild them by open market purchases of Governments, partly because of the "free gold" fear, partly because of

[1] The Glass-Steagall bill has corrected this defect, but only for a period of one year.

numerous other fears. In final analysis, therefore, the reserve base itself is shrunk at the very time when the credit system urgently needs resistance to deflation. The reserve base is thus the unhappy victim of irrational currency behavior on the part of a fear-ridden public. It tends to be driven to excessive contraction by the automatic working of the mechanics of the banking system.

b) Gold imports and exports are capable of generating instability in the reserve base rather than of playing the rôle of automatic correctives of relative international price levels and balances of payments. Since we are here concerned only with deflation, we may limit the discussion to gold exports. We have seen certain countries use gold withdrawals from foreign countries as a weapon of diplomatic bargaining. Even without the political attack on a country's gold stock, the situation would be highly unstable, partly because of the abnormally high liquid balances held internationally in the post-war period, and partly because of the abnormally acute disequilibrium in balance of payments in a world influenced by war debts, reparations, and tariff walls.

When the United States is now exposed to an abnormal gold drain, two untoward developments follow. The domestic public becomes frightened

and increases its currency-hoarding, and the Federal Reserve become anxious about "free gold." The Federal Reserve are reluctant to offset the loss of gold by buying Governments, because such buying tends to reduce "free gold." Under such conditions, the external gold drain tends to accentuate the contraction of member bank reserve balances. Normal offsets and correctives do not function adequately.

c) Under a wave of liquidation, rediscounts act as a depressant on the credit structure. Member banks are afraid to rediscount because of the opprobrium which indebtedness to the Federal carries. The Federal Reserve are inclined to assume that by making money freely available to anyone who wants to rediscount they have completed their duty, thus placing the burden of initiative on a frightened banking community. Moreover, the Federal Reserve are reluctant to buy Governments for fear that the consequent paying off of rediscounts would reduce free gold to a dangerously narrow margin. Under these conditions, member banks tend to pursue the elusive goal of individual liquidity by converting loans and investments into cash. The effect upon member bank reserve balances is strongly deflationary at a time when the basic need of the banking system

is central action designed to combat the ravages of deflation.

d) The purchase of bills by the Federal Reserve is influenced, among other things, by the total supply of bills outstanding. In a wave of depression, international trade is declining sharply in dollar volume with the result that the supply of bills employed to finance such trade also is declining. The total supply of bills available, therefore, runs down. In the meantime, bills satisfy the private banks as a form of liquid asset, and private banks tend to bid for bills against the Federal Reserve. The net result is that as depression goes on the Federal tends to secure a diminishing volume of bills for its portfolio and is driven into a Government bond market for any major plan of open-market purchases.

e) The purchase of Government bonds by the Federal Reserve encounters many obstacles during a period of deflation. As long as substantial rediscounts are on the books, purchase of new Governments tend to be canceled by a reduction of rediscounts, with consequent impairment of free gold. Moreover, the member banks are averse to seeing the Federal purchase bonds because they fear a later day of reckoning when the Government decides to sell the bonds. Such sales have, at impor-

tant periods, had the effect of driving bond prices down and so of inflicting loss on the member banks. Furthermore, the Federal Reserve reason that it would do no good to force funds on the market when the member banks are in no mood to co-operate in putting the money to constructive uses. All of these considerations tend to produce a stalemate in central bank policy and to allow the irrational forces of liquidation to proceed unimpeded.[1]

V

Having considered the five variables in some detail, let us observe their bearing upon the main thread of the argument. These volatile and unstable factors have the effect of cutting off the fluctuations of credit from the moderating influence of the gold base. They permit excessive fluctuations in credit volume and extremes of inflation and deflation in the monetary standard. By virtue of this development it is not an exaggeration to state that the United States has already abandoned the gold standard in the sense that it has abandoned

[1] The Glass-Steagall Bill solves the "free gold" problem, but only for a period of one year (if the bill is passed in the form contemplated at the present date of writing). This temporary character of the solution will curb freedom of action during the year of grace. The rediscount provisions of the bill do not alter the conclusions of this paper.

the basic supply function of gold as a regulator of credit. This delinquency of gold is a much more significant and fundamental phenomenon than most of the technical aspects of the gold standard which loom so large in popular discussion. The public finds a more picturesque story in the depreciation of a monetary unit from gold parity than it does in the fundamental influence of gold upon the world's credit volume. Nevertheless, the economic destinies of the world are in a very deep sense at the mercy of the forces which govern the credit supply of the world.

How do these considerations bear upon the topic of this discussion, "The Future of the Gold Standard"? I submit that the real threat to the gold parity is not to be found in the events which excite the public imagination but in the unstable factors which permit such an excessive contraction of credit as has been witnessed in the United States during the past two years. The gold standard can endure a great deal of abuse, but there are limits to its powers of endurance. Unless the vicious shrinkage of credit, which has gone on with accelerated vigor in the last six months and which continues up to the present moment, can be unmistakably brought to a halt, the gold parity will have little chance of survival in the United States.

This danger is one which arises not from what the enemies of the gold standard are doing but from what its friends are doing. The friends of the standard in official and private circles who are advocating liquidation and deflation to the bitter end are the real forces tending to undermine the standard. Those who insist that the Federal Reserve have no responsibilities in the matter and who urge a laissez faire attitude on the part of leadership are sponsoring a process which means nothing less than drifting off the gold standard.

Such an outcome is unnecessary. The positive action called for is a central bank policy calculated to guide the reserve base of our credit structure along orderly and moderate lines.

Such a policy requires substantial modification of our traditional ideas about the Federal Reserve System. The founders of that System rightly pride themselves upon a great constructive achievement. But it is time now to recognize an important flaw in the framework. It is time to recognize that the Federal Reserve mechanism does not constitute an automatic self-corrective device for perpetuating the gold standard. On the contrary, it contains within itself the seeds of its own destruction unless a clearer conception of the responsibilities of central bank leadership can be established.

VI

The outside countries of the world are waiting to see whether the United States can rise to an adequate conception of the administration of the gold standard before deciding what to do about the future of their monetary standards. It is exceedingly doubtful whether England will return to a gold base which makes the pound sterling the unhappy victim of such convulsive movements as we have lately seen in the dollar. Unless the dollar can be administered along lines of greater moderation and restraint, the dollar is unsafe as an anchor for the monetary systems of the outside world. Failing a more adequate compass for the steering of the dollar, England will probably endeavor to set up an hegemony of countries tied to a new sterling unit which will possess the merits of moderation and restraint in its value fluctuations. On the other hand, if the United States is willing to correct the flaw in the Federal Reserve mechanism by a definite plan for protecting the dollar from irrational excesses, the world will hasten to return to a gold basis in which the dollar plays a pivotal rôle.[1]

[1] These comments were made before the Federal Reserve embarked upon a policy of open market purchases of government bonds in the second quarter of 1932. The success of this policy may depend upon the question of timing. Was it delayed too long? It is not the function

of this discussion to predict the outcome of the 1932 Federal Reserve policy but it is appropriate to observe that if such policy embodies a new attitude of responsibility for moderating fluctuations in the reserve base, a constructive step of major importance would have been taken. One of the major difficulties is that, in light of the deflation permitted between September, 1931, and March, 1932, the national budget is far out of balance. Continuation of a heavy deficit might easily impair confidence in government credit and undermine the gold standard along lines of European precedent in the post-War period. Effectiveness of Federal Reserve policy is conditioned upon a balancing of the national budget.

MONETARY STABILITY AND THE GOLD STANDARD

By John Henry Williams

MONETARY STABILITY AND THE GOLD STANDARD

I

There is frequent complaint, especially in this depression, at the slowness of our progress in monetary theory and practice. It is pointed out that many of our ideas were essentially worked out in the period following the Napoleonic wars. We are even said to have forgotten or ignored some of the most valuable contributions of that period. While easily exaggerated, there is truth in this view. But it is less an occasion for reproach than an indication that only in periods of great monetary disturbance is our thinking seriously challenged and the necessity for improving it decisively revealed. Now that we are engaged upon this task, with a fervor comparable only to that which characterized that earlier period, our discussions have given rise to points of view as varied and contrasted as were those earlier ones. One general view, which takes many forms, is that our post-war mistakes have consisted of departures from previous principles. We are reproached, for example, for having permitted banks to increase their

non-commercial assets, in defiance of the spirit of the Federal Reserve Act. This point of view, which carries with it the narrow interpretation of rediscount eligibility—"self-liquidating" commercial paper, water-tight compartments for commercial and investment banking, "legitimate" (commercial) versus "speculative" (security) credit—is in many respects a direct descendent from the English banking school of the early nineteenth century. We are reproached again for having permitted, in depression, low money rates, which retard liquidation and interfere with its necessary completion, and this reproach is likewise coupled with the assertion that our practice is in defiance of principles successfully pursued during the last century. We are told by others that the founders of the Federal Reserve System never intended its use as an agency for credit control, whether for price stabilization or any other ambitious purpose, but as an agency of elastic supply, to meet the needs of industry and trade, a view which carries the implication, again directly derived from the early banking school, that business under these conditions creates and extinguishes its own "legitimate" supply of credit.

In still another view, post-war experience has shown that there is no middle ground between an

automatic gold standard and a managed credit standard, and that the way out is a return to the automatic system, a view to which the currency school would have heartily subscribed, but which, when pushed to its logical conclusions, seems to involve a misunderstanding of the nature of credit and of central banking. More numerous than any of these is the school which advocates monetary stabilization by central bank management, though there are internal disagreements as to criteria and methods.

That there must be credit control, that the choice is merely between better and worse control, and that under central banking the control can never be "automatic" would seem to follow from the nature of the credit mechanism. The use of credit economizes money payment. If all in a community deposit their cash in a bank and make payments only by check on the bank, and if there are no other banks, there will be no limit to the amount of credit expansion which can occur. Payments between individuals, if for equal amounts, will merely cancel out. If individuals borrow from the bank to make such payments, the resultant deposits (and also the loans) will again offset each other and cancel out. If the entire community borrows on balance from the bank—increasing its in-

vestment in production goods (or possibly merely in securities representing such goods)—deposits will increase without any other limit than the goodness of the wealth offered by borrowers as pledges for the loans. There is thus a dual result. The individual's need to hold money or credit is reduced, since his other wealth can be converted into a means of payment by loan. The bank's ability to supply such means of payment is without quantitative limit. These are the objects toward which banking economy progresses. It follows that in proportion as these objects are achieved the sole test of the soundness of the process becomes the goodness of bank assets, a purely qualitative test.

A central banking system is itself such a one bank system, with the member banks as its depositors. In so far as the member banks keep pace in their extensions of credit to the public, there will be no interbank net debits, however much their own deposits and loans may increase. In so far as some expand faster than others, debit balances due from bank to bank may be borrowed from the central bank. If all payments throughout the system are by check against deposits, and if we assume a closed system, the same results ensue as in the previous case: member banks' need to hold deposits in the central bank is reduced;

the central bank's ability to lend such deposits has no quantitative limit. Under such conditions there is no need of bank reserves, either by the member banks or the central bank; the sole test of the workability of the system is the quality of the assets of the member banks. To deny that there is need for control would be to deny that there are dangers in a limitless supply of credit.

Though these conditions are hypothetical, their consideration helps one to perceive the changing nature of the problem of managing bank credit as the banking mechanism is improved. In the earlier stages the emphasis is mainly upon supply of credit, but, in proportion as that problem is solved, the emphasis becomes centered upon control. Moreover, the character of the control problem changes. It becomes less a question of insuring adequacy of reserves, and more a question of the quality of bank assets, which is in turn a question of the general state of business. It was natural enough that the founders of the Reserve System should have been preoccupied with the question of supply of credit. Their problem was to supplant an inefficient credit system by an economical one. Yet it would be untrue to say that the founders were unaware of the necessity for control. They prescribed safeguards, but not the proper ones.

There is deeply imbedded in the Act the philosophy that member bank credit can be controlled by prescribing the uses to which central bank credit shall be put; and, further, that if central bank credit is confined to these proper uses there will be no problem of control. It has taken some eighteen years of experience, including two major booms and depressions, to reveal the fallacies inherent in this philosophy; and notwithstanding the revelations, the philosophy persists strongly in the bill now before the Glass Committee.

The boom of 1919–20 took primarily the form of commercial loans for commercial speculation. It should serve to explode once for all the notion that credit cannot be excessive if it is "self-liquidating" in form. The problem was one not of kind but of quantity and quality of credit. The boom of 1928–29 took primarily the form of secured loans for financial speculation. The Reserve System met it with an attempt to discriminate between loans for commercial and for speculative purposes. Its complete failure should explode once for all the notion that it is possible to dictate the uses to which credit is put, rather than the quantity of credit for all purposes.

II

In the strict theory of gold standard there is no room or need for central bank control of credit. Control is achieved automatically by the flow of gold between the banking systems. This principle, which the currency school sought to embody in the English Bank Act of 1844, assumes sensitivity of credit, prices, costs to gold flow, and on these assumptions links the maintenance of monetary equilibrium to the balance of international payments. It purports to give external stability conditioned upon internal flexibility. Credit expansion or contraction in one country is communicated by gold flow to other countries; by diffusion its effect is minimized and controlled. Banking systems thus mutually control each other; in the same manner as banks, members of a system, interact upon each other through the flow of debit balances.

But the conditions which gold standard assumes are never found fully and simultaneously developed. How it will work must depend upon the magnitude of economic changes and upon the degree of friction encountered at the several stages of the adjustment process. There is almost certain to be some degree of conflict between an international control of money and the aims of economic nationalism. A theory which by its logic requires

a free international play of economic forces must work imperfectly, at best, in a world characterized by mounting tariff walls, import and export quotas, and even positive prohibitions upon trade. And yet, so long as nations are in different stages of economic growth and so long as they exhibit widely varying degrees of flexibility in their economic structure, it will always be possible for countries to achieve particular advantages (or avoid particular ills) by tariff policy, even though the total effects of such policy may be harmful.

Apart from interferences with trade, the gold standard works best (1) when banking systems are fully loaned up to the limit set by their reserves, so that the flow of gold must cause a proportional variation in the amount of credit; (2) when capital movements and goods movements are sensitive to each other, requiring but little flow of gold to induce equilibrium in the balance of payments; (3) when the demand for international products is elastic, so that a fall in prices will produce an increase in value of exports relative to imports, and contrariwise; (4) when unit costs of production are responsive to money price variations, so that, when prices change in response to increases or decreases of gold, production and trade will respond to the movement of prices.

Given conditions like these, equilibrium is preserved with little flow of gold. Large or persistent gold movements are proof that maladjustments are serious and the corrective action of gold flow slight; indeed, the flow may serve to aggravate rather than to relieve disturbance. The collapse of the gold standard in the agricultural countries was a case of inelastic demand-supply. When prices fall, such countries find it peculiarly difficult to curtail production; moreover, total value of exports is likely to decrease relative to imports, which consist of industrial products for which demand is more elastic. Meantime, new capital borrowings are cut off, whereas interest on previous debt must still be paid. With prices falling, the debt payments and the imports entail a progressive increase in quantity of exports relative to value of exports, but increasing quantity depresses prices farther. It becomes a case of indeterminate equilibrium, and gold flows out persistently until collapse ensues.

England's difficulties have displayed another type of vicious circle. Her trouble has been in part a bad balance of productive forces, in part wartime dislocations of foreign trade; but in part it has been the increased rigidity of her economic structure. Wages and other costs have not come

down with prices, with resultant losses and unemployment. Specialization in foreign trade industries creates the problem of unequal magnitude as between industries. Once these trades are lost, the factors must shift into other foreign trade industries of equal magnitude, migrate to other countries, or live in idleness at home on the public bounty. There cannot, in the nature of the case, be domestic alternatives. Foreign investment is preferred to home investment, but export trade does not respond because costs are high relative to foreign costs. Imports increase relative to exports. The cumulative effects were just the opposite of those which England experienced in the nineteenth century. They exercised an insistent pull on gold, which was fought off for some years by importations of short-term balances in response to comparatively high discount rates. Given, then, a severe shock to confidence and the headlong withdrawal of these balances last summer, collapse of the gold standard ensued.

The experiences of France illustrate still other frictional disturbances. The French price level has proved remarkably insensitive to gold inflow. There is difficulty, apparently, at two points in the adjustment process. Gold inflow does not result in a proportional increase in bank credit, owing in

part to the inelasticity of the French money market, to the lack of adequate outlets for short-term investments, and in part to the fact that French banks evidently do not attempt to live up to the rule of being loaned up to the limits of a constant ratio of reserves. France has today virtually 100 per cent coverage in gold and gold exchange for its outstanding bank notes. There is the further difficulty that increased purchasing power does not result in a proportionate increase of spending, but increases hoarding. With credit and prices comparatively insensitive to gold, trade changes come about with slowness; the country absorbs gold much more readily than it gives it out again.[1]

In the absence of frictional difficulties, adjustments of international trade equilibrium will occur within the balance of payments itself, with little resort to gold flow. Before the war, capital movement and goods movements were to a large extent but different phases of a single process of change.

[1] There is not room for detailed discussion. The explanation, now apparently most in vogue, that French gold inflow is traceable to the "needs of trade," to support the increase of notes in circulation, seems to beg as many questions as it answers. France is said to have imported gold because she "needed" it; England has "needed" gold but could not get it or retain it; the United States is said to have got it without "needing" it and to have retained it because she would not use it.

The young borrowing countries required for development goods which older, lending nations could supply, and paid their interest in foods and raw materials necessary to feed the lending nations' industries. Trade adjustment was thus to a large degree a simultaneous process, rather than a succession of steps. Gold flow would occur only to the degree that loans and trade failed to balance.

It has probably long been true that capital, the most sensitive item in the balance of payments, has fluctuated more widely than other items and, in this sense, has had closest cause-and-effect relation with gold movements. Depending upon the other conditions, it may serve either as a substitute for gold flow or as an aggravator of its flow. Its effects may be cumulative. A rise of prices—such as without capital movements would set in motion the familiar train of imports, gold flow, price fall, trade change, equilibrium—may, in fact, attract capital, as may any other change affecting profits, real or anticipated. If the capital flow is sufficient, it will induce gold inflow, more rise of prices, more capital inflow. The same cycle may occur in terms of security prices, as in our recent speculative boom, and may persist until stopped by collapse of the gold standard in the countries whence the gold is drawn or by the toppling of the

inflated credit structure in the receiving country. In such circumstances international gold flow can hardly be relied upon to provide control of credit, prices, and trade. Central bank management becomes a necessary preventive of gold flow. The Bank of England's discount rate policy, designed to protect the gold reserve, was before the war an effective check upon the process in so far as a higher bank rate could discourage British foreign lending, attract outside short-term funds to London, and stop the outflow of gold by reversing the forces which caused it.

The policy of high money rates, which we are now reproached by some writers for having abandoned as a cure for depression, was in fact never a depression policy, but a gold-protection policy, most manifest in periods of crisis but resorted to whenever reserves were threatened. During the Baring Panic, for example, the Bank of England had a high rate and strengthened its reserves by borrowing gold from the Bank of France; but during the long depression which followed, bank rate was unprecedentedly low. Since the English banking system had in it very little slack, being operated upon a comparatively small reserve of gold and employing an expensive form of currency in the Bank of England note, protection of gold re-

serves was the chief, and probably the only important, criterion of credit policy. The Bank of England's action was, therefore, prompt and ordinarily effective. England was the leading exporter of capital, the free market for gold, the international discount market, the international banker for the trade of other countries as well as her own. She thus held all the controlling elements of the situation in her hands, and her monetary and trade position was such as to insure their prompt and effective use. The world was, in this sense, upon the sterling standard, and the Bank of England was the world's central bank.

The post-war period has been marked especially by a great increase in the international flow of short-term capital. Partly in consequence of the increasing reluctance and suspicion of long-term lenders, but mainly by reason of the processes involved in European monetary reconstruction, the world's money markets have become saturated with such balances. Though carried to extremes under the abnormal conditions of recent years, such balances are, and have always been, a necessary part of the mechanism of international money market supply and control. They represent a further evolution of the process of economizing money payment, further centralization of reserves, and,

under favorable conditions, a further economy in their use. But unlike the member bank reserves in the central bank, they are subject to no legal compulsion and may be withdrawn at the will of the foreign owner. They are, in consequence, highly unstable and are most apt to be withdrawn when they can least be spared. The effect is similar in kind to hoarding, to a run on a bank, or to a wholesale withdrawal of reserves by member banks from the central bank; it is destructive of the basic assumptions upon which the credit mechanism is constructed. The problem is of the same kind as that presented before the war by interior balances in New York banks under the National Banking System. Just as internal transfers then produced periodically a collapse of the domestic banking system, so the transfer of foreign balances can produce a collapse of the international gold standard. The defense against both dangers is the provision of a surplus of reserves in the hands of an institution capable of supplying the means of payment to any desired extent. But two conclusions follow. Such a system can never be automatic; it is dependent for its maintenance upon effective machinery of control. And there is further the paradox that the gold standard, which is based upon the assumption that banking systems are loaned up to the

limits set by constant reserve ratios, requires for its preservation a surplus of free gold.

III

There is thus a fundamental conflict between the principles of central banking and the principles of the gold standard. Central banking is based upon the recognition that a banking system must have a surplus of reserves above ordinary requirements, for protection against both internal and external drains; while the price-specie flow mechanism assumes that banking systems are loaned up. A surplus of free gold leaves room for play between gold flow, bank credit, and prices. Member bank reserves decreased by gold flow may be replenished by rediscount; central banks may offset the effects of gold flows by their open-market operations; member banks in debt to the central bank may use gold inflow to pay off rediscounts rather than to expand credit. If the central bank's reserve is large, or if the system utilizes reserves with great economy, the country is free to pursue an internal monetary policy with comparative disregard of external influences. But the effect is to throw a double burden of adjustment upon countries not similarly equipped with free reserves.

It is on such grounds that the Reserve banks

have been accused of sterilizing gold and of causing maldistribution of the world's reserves. Broadly regarded, there is little truth in the accusation. We received our gold during the war, and in the years 1921–24. In the war the gold inflow was accompanied by a great expansion of credit; in the later period, while it was used to pay off rediscounts swollen by the boom of 1919–20, it did also serve to expand credit substantially. Since 1924 our gold holdings have not greatly increased, though there have been violent outward and inward movements. In the period 1914–29 our gold increased by about $2,500,000,000 and our loans and deposits by more than $35,000,000,000. At the end of the period, our gold reserves were less than 7 per cent of our bank credit. We have made a more intensive utilization of gold than any other country except England.

It is true that our price level was comparatively stable from 1922 to 1929, but that fact is not proof that there was not some price inflation, relative to costs. It can be argued that but for credit expansion prices would have fallen, and that they should have done so. It was on such grounds that the Austrian economists predicted the depression. In any case it is difficult to ascribe the stability of our price level to sterilization of gold, in view of the

substantial expansion of loans and deposits. After 1924, when our gold holdings ceased to grow, demand deposits ceased to expand, but the growth of loans and of time-deposits continued. The phenomenal increase of time-deposits since the war appears to indicate not unwillingness of our banking system to utilize gold but saturation of demand for credit. As bank assets expanded, the public transferred an increasing portion of the resultant deposits to idle deposits; and during the boom of 1928–29 these deposits, in the form of "loans for others," served to finance security speculation.[1]

It is true, nevertheless, that we have not needed all our gold, in view of the economy of the reserve system; and it is even more true that by reforming our system of note issue, which makes the principal internal demands upon gold, we might have economized gold much further. Some writers have insisted that our gold sterilization has consisted in the failure to utilize our reserve as intensively as possible; we should either use it ourselves or distribute it to others. On the theory that we had an undue share of the world's gold, we tried in 1927 the experiment of pushing it out. We discovered

[1] For my views on the moot question whether speculation absorbs credit, see "The Monetary Doctrines of J. M. Keynes," *Quarterly Journal of Economics*, August, 1931.

that there is a vast difference between trying to expel gold and controlling a flow which is induced by economic conditions themselves. By putting down the rediscount rate we succeeded in exporting the accumulations of the preceding five years. But if low money rates induce an increased domestic use of credit they may start a spiral of expansion, the last phase of which is inflow of the gold which flowed out at the beginning. We completed this full circle between 1927 and 1929. We witnessed the paradox of large imports of capital into the country, which on monetary grounds, should have been supplying capital to other countries. The draining of foreign funds into our stock market seems, without question, to have been one cause of the depression. The most significant aspect of the movement was that it was in response to high money rates ascribable in part to the Reserve banks' efforts to check domestic credit expansion. It revealed clearly how the problem of credit control by central banks has changed since the war. The world is more closely knit, and there is frequently a sharp contrast between the internal and external results of a change of bank rate. This fact has been felt also in England and in Germany on many occasions in recent years. For example, the Reichsbank has found that, when it put up its rate

in order to decrease credit, short-time balances flowed in from abroad; and when it put down the rate in order to increase credit, these balances went out again.

To insist upon playing the rules of the gold standard by a full utilization of gold is, under such conditions, to find one's self upon the horns of a dilemma. The Glass-Steagall Act enlarging our free gold was the belated recognition that the preservation of our banking structure, and of the gold standard itself, rested upon the provision of an adequate surplus of free gold. It is an interesting commentary that some of the economists who had previously complained about sterilization of gold were strong advocates of the measure to increase the surplus.

But a more striking paradox was the general recognition of economists that such a step was a necessary preliminary to the increase of central bank credit in the home market by open-market operations. In order to utilize our reserves at home we had to prepare to divest ourselves of a large part of them through French withdrawals, with the further probability that having demonstrated conclusively our lack of need of them we should not lose them at all. England, having failed to react to the gold standard through the medium

of prices, costs, and trade, freed herself from its tyranny by a suspension of the standard. That, after all, has been her favorite method in almost every crisis since the standard was established. We have remained on the gold standard by a conclusive demonstration that it has no power over us; we have preserved it by being able to ignore it. A more precise contradiction of gold standard theory could scarcely be imagined. Granting much to the abnormality of recent conditions, it seems clear not only that the gold standard cannot be operated under modern conditions upon its original principles but also that, however managed, it cannot serve as the sole criterion of credit policy. There is a logical conflict between the gold standard and domestic monetary stability. The former imposes external control; the latter must, in many circumstances, insist upon internal control. When one considers the heterogeneity of banking systems, the lack of uniformity as to economy of reserves, the marked differences in economic structure and flexibility, and in stages of development, the wonder is that the gold standard should have worked as well as it has done.

Yet the world will probably hesitate long, and I think rightly, before abandoning it. With all its faults, gold does exercise the only important objec-

tive restraint upon that process of evolving a costless and limitless means of payment toward which the banking economy persistently progresses. Until we can satisfy ourselves that there are no dangers in such a prospect which we cannot handle by discretion, we are not prepared to cut deliberately away from gold's restraint. But it is no less clear that the chief emphasis already is, and must be, upon credit management. Gold standard provides, at best, the general framework within which management must function. It sets only the limits to which monetary variation can be carried, with the further important qualification that, if the causes of monetary disturbance are great enough and are not corrected by management, the gold standard will not prove an effective barrier against them. It is scarcely possible to find a major economic conjuncture in the past century which was not accompanied by gold standard collapse in particular countries.

Today, countries off the standard necessarily manage their currencies; but more significant, from a theoretical viewpoint, is the fact that a country like our own, which, by reason of its progress in economizing reserves, has capacity for very wide variations in its supply of purchasing power well within the limits set by its

gold reserves, is compelled to find other criteria for the management of credit. It is this fact, without doubt, which has made the Federal Reserve System since the war the world's most interesting and important laboratory for the study of monetary problems. With such a system as ours, it is futile to endeavor to establish legal safeguards as substitutes for management. The policy of imposing restraints by such means as narrow interpretations of rediscount eligibility, attempts rigidly to mark off investment from commercial banking, legal preventives of speculative uses of credit, is indeed a recognition of the dangers inherent in an economical system such as ours. But such a policy does not check expansion and proves injurious when, as recently, the problem is to check deflation. If pushed as far as the Glass Committee intended in its original bill, it would seriously impair the money market. The more effective policy, and the only one consistent with the nature of the processes of credit creation and diffusion, would seem to be to maintain a broad contact between the central bank and the money market, to endow the central bank with wide powers of discretionary control, and to insist upon their use.

We do not escape the problem by insisting that it is hard, that our knowledge of it is still in its

infancy, that economists differ widely both as to criteria and methods, and that we have made mistakes in the past. We have no choice but to face it and to endeavor by experience to improve upon our practice. The task of achieving monetary stability by management has perhaps been injured almost as much by its friends as by its critics. There is a tendency, I believe, to claim too much for what central banks can do. In ordinary times the task is mainly one of smoothing out minor irregularities and presents no special problems. As to major conjunctures, it is difficult to prove either that money is the dominant factor or that a monetary policy could be the chief cure; but it is always a leading factor. Granting, however, the dangers of expecting too much from credit management, and granting also the deficiencies of our understanding, it is safe to say that both our ability to control and our knowledge of why to control considerably outrun our performance. Perhaps our chief difficulties, at present, are, first, that we have been slow to face the issue and to recognize the inevitableness of credit control by management, involving us in hesitations, delays, and halfway measures; and second, that our system is unwieldy, perhaps unavoidably so by reason of its size, involving much delay and lost motion in agreeing

upon policies. Credit control must be prompt to be effective.

As to the gold standard, the world will undoubtedly return to it in some form or other, even though eventually it may be outgrown. International trade and capital relations will grow in importance, even though there is at present a disposition to turn our backs upon them; stable exchanges will be essential, and it seems doubtful whether such stability can be accomplished as well by any other means. Our problem is to make the best reconciliation possible between external and internal stability without sacrificing either unduly to the other. It is unlikely, if we make proper adjustments now, that the world will soon again have to face international movements of such speed and magnitude, or of such uneconomic origin and character, as we have witnessed since the war. The immediate problem is to restore normal conditions. The greatest single help, internally, would be a vigorous open-market policy designed to reduce rediscounts of member banks and to increase the supply of purchasing power. The greatest help of international character would be the substantial reduction, or cancellation, of war debts, and the scaling down of tariff barriers. The logical end of the evolution of credit management, and the only real

hope of solution of the conflict between external and internal stability, would be closer co-operation of central banks looking toward some form or degree of supernational management. How far we should go in that direction, how much can be achieved, it is not possible to predict. I have felt less sanguine than some others. But it seems safe to predict that the subject will be a principal feature of our thought and action in the period to come.

APPENDIXES

APPENDIX I

RECOMMENDATIONS OF TWENTY-FOUR ECONOMISTS PRESENT AT THE INSTITUTE

Chicago, January 31, 1932

President Herbert C. Hoover
Washington, D.C.

We have the honor to transmit to you the following recommendations unanimously adopted by the group of economists whose names appear below, following a series of closed discussions on "Gold and Monetary Stabilization" held at the University of Chicago under the Norman Wait Harris Memorial Foundation.

QUINCY WRIGHT, *Chairman*
DONALD SLESINGER, *Secretary*
Norman Wait Harris Memorial Foundation
The University of Chicago

1. We recommend that the Federal Reserve banks give a substantial preference in discount rates to commercial paper eligible as cover for Federal Reserve notes. We recommend further that the Federal Reserve Act be amended to empower the Federal Reserve Board, during the present emergency, to permit, in its discretion, the use of federal government securities on equal terms with commercial paper as cover for Federal Reserve notes.

We recommend these measures as effective means of in-

creasing the free gold of the Federal Reserve System and as constituting, therefore, an important defense against the consequences of gold withdrawals. We regard these measures as necessary prerequisites to the following recommendation with respect to open-market operations.

2. We recommend that the Federal Reserve banks systematically pursue open-market operations with the double aim of facilitating necessary government financing and increasing the liquidity of the banking structure.

3. We urge that the Reconstruction Finance Corporation vigorously and courageously carry out those provisions of the Act which authorize it to give aid to banks by making loans on assets not eligible for rediscount with the Federal Reserve banks.

4. We recommend that the federal government maintain its program of public works and public services at a level not lower than that of 1930–31, in order not to counteract the effects of the previous recommendations.

We believe that some measure of financial co-operation of the federal government with state and local governments is indispensable to the maintenance of adequate unemployment relief.

5. We strongly recommend the reduction or cancellation of the intergovernmental debts as an essential step toward recovery of world industry and trade, and we regard such a recovery as an important contribution to the restoration of our own prosperity. We call attention to the fact that the intergovernmental debts, while nominally unchanged since the debt settlements, have increased in real burden as a result of the fall in prices, thus impairing the capacity to pay under normal conditions.

6. We strongly recommend that the government enter into negotiations with other countries, leading toward a reciprocal and substantial lowering of tariffs and other barriers to world trade.

Signed:

James W. Angell, Columbia University
John H. Cover, University of Chicago
Garfield V. Cox, University of Chicago
Aaron Director, University of Chicago
Irving Fisher, Yale University
Harry D. Gideonse, University of Chicago
Max Handman, University of Michigan
Alvin H. Hansen, University of Minnesota
Charles O. Hardy, Brookings Institution
Frank H. Knight, University of Chicago
Arthur W. Marget, University of Minnesota
Harry A. Millis, University of Chicago
Lloyd W. Mints, University of Chicago
Harold G. Moulton, Brookings Institution
Ernest M. Patterson, University of Pennsylvania
Chester A. Phillips, University of Iowa
Henry Schultz, University of Chicago
Henry C. Simons, University of Chicago
Charles S. Tippetts, University of Buffalo
Jacob Viner, University of Chicago
John H. Williams, Harvard University
Chester W. Wright, University of Chicago
Ivan Wright, University of Illinois
Theodore O. Yntema, University of Chicago

APPENDIX II

PROGRAM OF THE NORMAN WAIT HARRIS MEMORIAL FOUNDATION, NINTH INSTITUTE ON GOLD AND MONETARY STABILIZATION, AT THE UNIVERSITY OF CHICAGO, JANUARY 27–31, 1932

LECTURERS

JACOB VINER, Professor of Economics, University of Chicago

H. PARKER WILLIS, Professor of Banking, Columbia University

GOTTFRIED HABERLER, Privatdocent, University of Vienna; Visiting Professor, Harvard University

LIONEL D. EDIE, Economist, Investment Research Corporation

PUBLIC LECTURES AT LEON MANDEL HALL

Wednesday, January 27, 8:30 P.M.—JACOB VINER: "The Balance of International Payments and the Gold Standard."

Thursday, January 28, 4:30 P.M.—H. PARKER WILLIS: "Federal Reserve Policy in the Depression."

Friday, January 29, 4:30 P.M.—GOTTFRIED HABERLER: "Gold and the Business Cycle."

Saturday, January 30, 4:30 P.M.—LIONEL D. EDIE: "The Future of the Gold Standard."

MEMBERS OF THE ROUND TABLE FROM OUT OF THE CITY

JAMES W. ANGELL, Professor of Economics, Columbia University

PERCY E. BARBOUR, Mining Engineer; Lieutenant Colonel, Engineering Reserves, 342d Engineers, U.S.A.

HERBERT FEIS, Economic Adviser, Department of State

IRVING FISHER, Professor of Political Economy, Yale University

MAX S. HANDMAN, Professor of Economics, University of Michigan

ALVIN H. HANSEN, Professor of Economics, School of Business Administration, University of Minnesota

CHARLES O. HARDY, Member, Research Staff, Institute of Economics, Washington, D.C.

JOSEPH A. KITCHEN, Ex Officio Member of North Dakota State Board of Administration, Industrial Commission

ARTHUR W. MARGET, Professor of Economics and Banking, School of Business Administration, University of Minnesota

HAROLD G. MOULTON, President, The Brookings Institution

ERNEST M. PATTERSON, Professor and Chairman of the Department of Economics, University of Pennsylvania

CHESTER A. PHILLIPS, Dean of College of Commerce, State University of Iowa

NICOLAS RAFFALOVICH, General Representative in Europe for Field, Glore and Company; Member, Society of Political Economy, Paris

JOHN HENRY WILLIAMS, Professor of Economics, Harvard University

HAROLD L. REED, Professor of Economics, Cornell University

JAMES H. ROGERS, Professor of Economics, Yale University

CARL SNYDER, Statistician, Federal Reserve Bank of New York

CHARLES S. TIPPETTS, School of Business Administration, University of Buffalo

IVAN WRIGHT, Associate Professor of Economics, University of Illinois

ROUND TABLE MEETINGS AT LIBRARY, BURTON COURT

Wednesday, January 27
- 10:00 A.M.—Organization
- 2:30 P.M.—"Is Monetary Stabilization Desirable?" (MR. REED)
- 6:00 P.M.—Harris Foundation Dinner, Burton Court

Thursday, January 28
- 10:00 A.M.—"Factors Determining the Monetary Gold Supply" (MR. KITCHEN and MR. BARBOUR)
- 7:30 P.M.—"Federal Reserve Policy" (MR. WILLIS)

Friday, January 29
- 10:00 A.M.—"Relation of the Federal Reserve System to the Gold Standard" (MR. ROGERS)
- 7:30 P.M.—"What Should Be Done in the Present Emergency" (MR. FISHER)

Saturday, January 30
- 10:00 A.M.—"The Measurement of Monetary Phenomena" (MR. SNYDER)

Sunday, January 31
- 10:00 A.M.—"Should the Gold Standard Be Abandoned" (MR. HARDY)
- 2:30 P.M.—"Price Stabilization in Relation to the Business Cycle" (MR. HABERLER)

INDEX

INDEX

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